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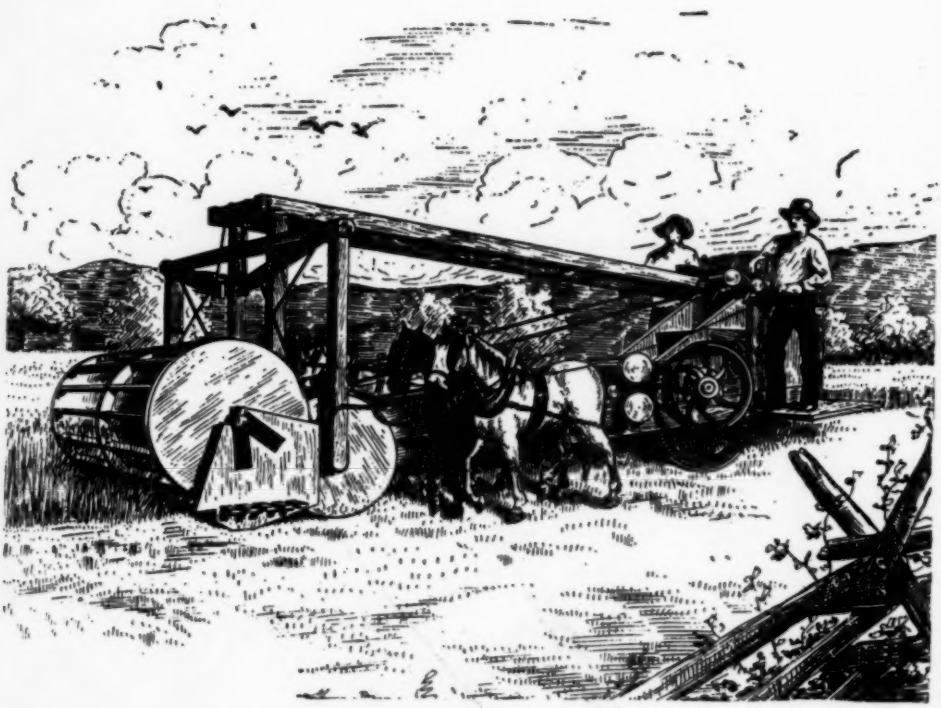

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AGRICULTURAL HISTORY

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(Cover design is from a U. S. Patent Office drawing of a combined reaper and thresher of 1846)

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Agricultural History is designed as a medium for the publication of research and documents pertaining to the history of agriculture in all its phases and as a clearing-house for information of interest and value to workers in the field. Materials on the history of agriculture in all countries are included, and also materials on institutions, organizations, and sciences which have been factors in agricultural development. The Society is not responsible for the statements or opinions of contributors. Editorial communications should be addressed to D. A. Brown, Editor, Agricultural Library, 226 Mumford Hall, University of Illinois, Urbana, Illinois. Books for review should be sent to C. Clyde Jones, Associate Editor, Room 112, David Kinley Hall, University of Illinois, Urbana, Illinois.

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*Origin of the Base Period Concept of Parity— A Significant Value Judgment in Agricultural Policy**

ROBERT L. TONTZ

The significance of value judgments in agricultural policy is demonstrated by the esteem with which the base-period price parity concept is regarded. Parity, as legally constituted and administered, has been severely criticized by innumerable agricultural economists; however, it continues to be looked upon by many farmers and farm leaders as a cherished goal of agriculture.

What is the origin of the base-period concept of parity that is regarded so favorably by many producers of our food and fiber? The purpose of this study, aided by the cooperation of several leading participants in the parity movement of the twentieth century, is to provide a fuller understanding of the ideas and developments that culminated in the current parity concept. This understanding is basic to studies of possible methods of improving our parity programs.

Parity, often referred to in writings and conversations on agricultural price policy during the last quarter century, is widely known as a symbol of farm fairness and justice. Although the American farm public, agricultural leaders, and others are familiar with the symbol, knowledge of its specific meaning is much less widespread. This is shown by the frequent but brief explanations found in the press. Generally, these explanations state that parity is a price farmers must get to give them the same (equal) purchasing power that they had in an earlier base period. Implicit in these explanations is the "ratio idea," or what is more commonly known as the base-period concept of parity, as enacted in 1933 and as contained in the parity act currently in effect.

Actually, parity as applied to farm prices is a concept of price fairness and justice to producers and consumers. As such it may include, as does the current parity concept, a base-period standard of price equality; however, it is not restricted to such a standard. A non-base-period version of parity was included in the Agricultural Marketing Act of 1929. The Agricultural Adjustment Act of 1933, regarded by some as the original farm parity law, did not mention the term, parity, with reference to farm prices. It did, however, express the idea of parity by implication—as did many of its antecedents. It also referred to "disparity" as the major reason for seeking price purchasing power "equality" or parity. Equality (parity) with reference to agricultural prices has been a long sought and seldom attained goal.[1]

Base Period Concept of Price Parity. Parity was a focal point in the farm issues of the 1956 political campaign and in all probability it will continue its significant role in matters pertaining to future farm legislation. During the campaign, expressions favoring price supports ranged from levels below 100 up to and including 100 per cent of parity. The underlying common denominator for the different positions taken was the base-period concept of price parity.

* The opinions expressed in this article are those of the author and do not necessarily represent the views of the U. S. Department of Agriculture.

[1] See Robert L. Tontz, "Evolution of the Term Parity in Agricultural Usage," *The Southwestern Social Science Quarterly*, 35:345-355 (March, 1955); and "Legal Parity: Implementation of the Policy of Equality for Agriculture, 1929-1954," *Agricultural History*, 29:174-181 (October, 1955).

The precursors of the base-period concept of parity were evidenced long before the early twenties. With the increasing commercialization of agriculture following the War Between the States, a keen awareness was felt for the significance of relative prices, i.e., prices received by farmers for products they sold as compared with products they bought. Purchasing power inequalities of farm prices relative to nonfarm prices represented a major factor in the rise and growth of farm organizations beginning with the Grange in 1867. In 1895, the David Lubin prize essay emphasized the purchasing power relationship by stating, "The farmer's interest does not lie exclusively in receiving remunerative prices for the commodities he . . . [sells]. His well-being is quite as much dependent upon the prices he . . . must pay . . ."[2] The U. S. Department of Agriculture presented data in the 1918 *Yearbook* showing the purchasing power of one acre of crop production for 1909 and other years.[3]

One of the first large-scale tests of the effectiveness of the "ratio price," a forerunner of the base-period price procedure, came during World War I. At that time, the ratio price-support method was used with only partial success by the Food Administration. This forward price proposal was announced in November, 1917 to support prices for the 1918 spring pig crop at 13 times the price of corn; that is, the support price for 100 pounds of live hog was to be equal to the value of 13 bushels of corn.[4] The Commission of seven swine men appointed by the Food Administration to determine the cost of producing hogs, according to Henry A. Wallace, adopted practically without change the ratio method of price determination advocated in *Wallaces Farmer* during the summer and fall of 1917.[5] The ratio method was not as prevalent as "cost of production" as a means of presenting evidence on the farm situation during the first and second decades of the twentieth century. Wallace referred to the ratio method in 1920 in the preface of his book on *Agricultural Prices* as a "cost of production" method. The ratio method was derived from a rule of thumb which had been followed by enterprising Corn Belt farmers since the 1870's.

In 1921, G. F. Warren, of Cornell University, applied the ratio idea to a 5-year prewar base period, 1910-14, and presented data on the purchasing power of farm products, including purchasing power per acre. Warren, who had been working on his approach since 1918, concluded that "Practically nothing that the farmer sells can be exchanged for the usual quantity of other things."[6]

In 1922, statisticians of the United States Department of Agriculture used the ratio idea in preparing a memorandum on "Agricultural Prices" at the request of George N. Peek and Hugh S. Johnson, President and Vice-President, respectively, of the Moline Plow Company of Moline, Illinois, showing what the price of wheat, corn, hogs, and cotton would have been during 1921 if the farmer had been getting "fair exchange value."[7]

The base-period concept of price parity (equality) was dramatically championed as the way to correct the distressed farm situation in the early twenties. The base-period concept was referred to as "fair-exchange value" by its most persistent proponents, Peek and Johnson. The Peek-Johnson plan, like other farm-relief plans, sought to bring benefits to the farmer by

[2] Charles F. Emerick, "An Analysis of Agricultural Discontent in the United States," *Political Science Quarterly*, 12:105 (March, 1897).

[3] U. S. Department of Agriculture, *Yearbook 1918*, 694-695.

[4] Walter T. Borg, "Food Administration Experience with Hogs 1917-19," *Journal of Farm Economics*, 25:444-457 (May, 1943).

[5] Henry A. Wallace, *Agricultural Prices* (Des Moines, Iowa, 1920), 30. See also Henry C. and Anne Dewees Taylor, *The Story of Agricultural Economics in the United States, 1840-1932* (Ames, Iowa, 1952), 495.

[6] G. F. Warren, *Prices of Farm Products in the United States*, U. S. Department of Agriculture, Bulletin No. 999, 1921, p. 19.

[7] *Agricultural Prices Compared by United States Department of Agriculture, January, 1921–February, 1922*, U. S. Department of Agriculture, 1922.

A Parity Symbol of 1902. Emblem of the American Society of Equity, which was symbolical of Price being on an equality with Production and Consumption.

tariff revision. This was to be done by protecting the products the farmer sold as many of the products he bought were already protected. Unlike many of the other farm-relief plans of the time, the Peek-Johnson remedy enjoyed a major distinction that set it off from all other disparity price remedies. This was the determined support of Peek and Johnson, capable and influential administrators who had proved themselves by their War Industries Board service under Bernard M. Baruch.

The Peek-Johnson plan is credited generally as the immediate stimulus for the idea of the base-period standard of equality (parity) which inspired the drafting of and the support for the numerous McNary-Haugen bills. Achievement of the base-period standard of price equality, or some portion thereof, has been defined as the goal of the major price support and production adjustment legislation enacted since 1933. The "principles" of the Peek-Johnson remedy, together with the outline of the plan to accomplish equality for agriculture, were presented to President J.

R. Howard and Secretary J. W. Coverdale of the American Farm Bureau Federation in October 1921.

Peek and Johnson Develop a Request. The American Farm Bureau Federation, following receipt of a letter on June 25, 1921, from the Chairman of the Joint Congressional Commission of Agricultural Inquiry, which was created to investigate the agricultural problem, sent to all the Farm Bureaus of the United States instructions to hold meetings to consider the agricultural problem.[8]

Reporting on the meetings in the Farm Bureau *Weekly News Letter* on July 14, 1921, Secretary J. W. Coverdale stated that the farmer was suggesting the remedy himself. According to Coverdale, the reason the farmer was not buying machinery, manufactured goods, and supplies was because his "rate of exchange" was too far below "par."[9] He added, "He needs to have the value of the goods he sells placed on a parity with the goods he must buy."[10] Burdensome transportation rates and lack of credit, it was stated, were among the greatest problems facing the farmer. The remedy consisted of "setting up cooperative marketing institutions owned and controlled by [the farmer] to distribute his products more economically to the benefit of both consumer and producer."[11] At that time, as is evident, farmers were receptive to the ratio idea and strongly in favor of cooperative marketing as a means of achieving it.

There is no indication that Peek and Johnson were specifically singled out to develop recommendations for solving the agricultural problem, despite their claim that the Farm Bureau officials had requested them to develop principles for this purpose.[12] The "request" resulted primarily from the initiative of Peek and Johnson who were trying to get grass roots agricultural support for their plan. As described by J. W. Coverdale, former Secretary of the American Farm Bureau Federation:

> As I remember the early history, Mr. George Peek and General Johnson came to my office with a proposition for general marketing. Pres. Howard was out of the city at the time and Johnson and Peek presented their story. As I recall it, they wanted the endorsement of the American Farm Bureau Federation. I suggested to them at the time that the American Farm Bureau organization was rather new and did not have a Research Department properly set up and further that Henry C. Wallace was the Secretary of Agriculture and was supposed to be the spokesman for legislation that would affect the welfare of the agricultural interests. I suggested that they go and see Secretary Wallace and present the program to him and if it met with his approval I would be glad to confer with them further.
>
> I also informed them that President Howard was in Washington at that time and that they might contact him while there seeing Secretary Wallace, which they did. As a result of those conferences, some time later, perhaps 30 to 60 days elapsed before Peek and Johnson returned with the proposed plan entitled 'Equality for Agriculture.'
>
> Just who created the title, I do not know, but I am of the opinion that Secretary Henry C. Wallace and James R. Howard, President of the American Farm Bureau Federation, were largely responsible for determining the base period.[13]

Peek and Johnson were asked to draft and submit their plan to the American Farm Bureau Federation, according to the late James R. Howard, first president of the Federation, only after several visits by Peek and Johnson. This and other related matters were explained by Mr. Howard as follows:

> Then came up the then perplexing farm situation. On their second or third visit with us a proposal was accepted by them that they draft and submit to us a relief plan. The result was their 'Equality for Agriculture' which was rewritten two or three times. . . . The first draft deals largely with tariff issues. . . . Since their plan was too controversial it was at our request

[8] U. S. Senate, *Agricultural Inquiry Hearings before the Joint Commission of Agricultural Inquiry*, 67 Congress, 1 sess., Senate Concurrent Resolution 4, I:256 (July 11-28, 1921).

[9] General correspondence (1920's) of the Secretary of Agriculture, National Archives.

[10] *Ibid.*

[11] *Ibid.*

[12] Original four page letter of transmittal accompanying the second edition of *Equality for Agriculture.* "To All Who May Be Interested In Equality for Agriculture," Moline, Illinois, April, 1922, by George N. Peek and Hugh S. Johnson. Letter submitted to the author by E. W. Ross, former associate of George N. Peek and Hugh S. Johnson, Moline, Illinois, October 5, 1951.

revised and finally resolved into the fundamentals of the old McNary-Haugen bill . . . a plan which I never personally endorsed.

I think there is no doubt Johnson and Peek were first to use the term 'Equality for Agriculture.' I cannot find who coined the word 'parity' though that principle was used in our earliest Farm Bureau resolutions and Coverdale and I issued a pamphlet in 1919 enunciating it. The period 1909-1914 was later adopted as the parity period because farm prices, industrial prices, labor costs, etc. seemed more even and equitable than any other period we could agree upon. As you know it is still used, though I am sure many of us would welcome a new and more equitable and up to date formula. Can you suggest one?[14]

Even though Peek and Johnson were asked to submit their plan in writing, acceptance by the Farm Bureau lagged. According to Henry A. Wallace, the Farm Bureau was against the idea of the Peek-Johnson proposal which had been set before the national agricultural conference in 1922. In order to get approval, he stated, he, Wallace, had "to go to the grass roots and get a resolution brought up from the floor of the Iowa Farm Bureau Convention in December of 1923 (the Resolution's Committee had refused to bring it out) in order to get the first Farm Bureau organization on record."[15]

The more fundamental reason, according to J. R. Howard, why Peek and Johnson undertook the task of developing a plan for the relief of agriculture was to bring relief to the defunct Moline Plow Company:

. . . Johnson and Peek . . . became connected with the defunct Moline Plow Company after World War I. Peck had been vice-president of the John Deere Company. The Moline plows had had prior to the war a good line of implements. Their problem was now a merchandising one [rather] than manufacturing. They came to the new Farm Bureau office at Chicago in my absence and proposed to Secretary Coverdale [that] they distribute through the American Farm Bureau organizations, the county agent taking the farmers' orders — they shipping the machinery knocked down which the farmer was to set up himself and pay for at an adjusted price advantageous to both farmer and Moline plow [company]. On my return we gave the matter careful consideration. The county agents were not officers of nor closely connected with the Farm Bureau. We were a new organization and inclined to go into new things slowly. The Grange fifty years before had gone down largely because of their lack of experience in machinery matters, so we turned them down.[16]

The conclusion of seeking relief for agriculture in order to attain relief for the farm implement company was offered also by Hugh S. Johnson:

. . . when the collapse of post-war inflation came in 1921, the hardest hit industry in the country was agriculture and the next was the farm implement industry. . . .

George [Peek] came to a typical conclusion: 'There can't be any business for us until the farmer is on his feet. There is nothing we can do here—let's find out what is the matter with agriculture.'[17]

Chester C. Davis, an associate of Peek and Johnson in the farm-relief struggle, concurred with Johnson's explanation by stating:

My understanding was that George Peek and Hugh Johnson, then associated in the management of the Moline Plow Company, reached the conclusion that as a matter of equity, and more particularly to keep the implement companies from going broke, farm purchasing power had to be increased. I imagine Peek put the pressure on and Hugh Johnson came up with the fair-exchange value. They cooperated in the brief, 'Equality for Agriculture,' which was presented to the American Farm Bureau Federation, Secretary Wallace, and others.[18]

In 1924, Peek resigned as president of the Moline Plow Company. Except for the Farm Board interlude, 1928-32, the two continued to fight for their remedy. This persistent effort, especially on the part of Peek who was later assisted by Chester Davis, was an influential factor in making the base-period parity price

[13] Letter to the author from J. W. Coverdale, Director Agricultural Bureau, The Rath Packing Company, Waterloo, Iowa, November 14, 1951.

[14] Letter to the author from J. R. Howard, Homelands Farms, Clemons, Iowa, December 13, 1951.

[15] Letter to the author from H. A. Wallace, Farvue Farm, South Salem, New York, June 12, 1953.

[16] Letter to the author from J. R. Howard, December 13, 1951.

[17] Hugh S. Johnson, *The Blue Eagle from Egg to Earth* (Garden City, New York, 1935), 104.

[18] Letter to the author from Chester C. Davis, Associate Director, The Ford Foundation, Pasadena, California, November 9, 1951.

idea popular and getting it enacted into law as the major objective of the Agricultural Adjustment Act of 1933.

Equality for Agriculture under the Protective System. The fundamental goal of Peek and Johnson's farm relief plan, as stated in their brief, *Equality for Agriculture*, was to restore agriculture to "equality of opportunity and return with industry" and to "desist" the attempt to operate the protective principle to the detriment of agriculture for the benefit of industry.[19] In the early part of 1922, they published their brief without authorship shown. This followed the less than enthusiastic acceptance of the idea, if accepted at all, by the American Farm Bureau Federation.

The Peek-Johnson remedy, as presented in the first edition of *Equality for Agriculture*, was based on the argument that agricultural tariffs cannot protect agriculture, especially an agriculture with surpluses. Briefly, they asserted that the world price fixes the domestic price of every crop of which a surplus is exported. Industrial tariffs can and do protect prices of articles for which crops are exchanged; however, the fair-exchange value of a crop is reduced to the protection afforded industry. The protective principle, it was stated, is operated for the benefit of industry to the detriment of agriculture, which can no longer bear the burden.

The proposed remedy for the ills of agriculture consisted of revising the doctrine of protection to insure agriculture a "fair exchange value" on the domestic market; otherwise, the protective principle, it was asserted, would perish.[20] The fair-exchange value for any crop was defined as "one which bears the same ratio to [the] current general price index as a ten-year pre-war average crop price bore to [the] average general price index for the same period."[21] The base period for the ratio price was the 10-year period 1906-15.

Financing of the plan was to be undertaken by a statutory loan assessment on a per pound or per bushel basis. In the general statement of the plan, this was explained in the following way. From worst experienced years of price, production, and surplus, an empirical formula was to be determined, which when applied to any future year, would compute a percentage of price per bushel or per pound large enough to absorb any probable loss. This differential was to be computed and *announced* in ample time before the planting season to enable farmers to plan crop acreage with reference to existing supply. By authority of a federal statute, this percentage was to be collected as a "differential loan assessment" on each pound or bushel when and as sold by the farmer. Scrip was to be issued for such receipts. It would bear interest on a retirable value to be fixed and announced when losses and expenses were determined.[22]

The equality-for-agriculture plan favored a "fair" return from farm operations, an objective long sought for farm relief. The authors recognized that prevailing sentiment was against arbitrarily fixed price goals; a sentiment compounded from many previous experiences of an unsatisfactory nature, as well as from the current expressions of their time.[23] Hence, a way had to be found to circumvent the popular dislike of anything resembling

[19] [George N. Peek and Hugh S. Johnson], *Equality for Agriculture* (Moline, Illinois, 1922), 47 pp. Prior to the anonymous publication of *Equality for Agriculture*, Peek and Johnson anonymously published a 30-page memorandum entitled *An Analysis of Present Day Agricultural Problems*, wherein they asserted, among other things, that agricultural prosperity will be assured only when agriculture shall receive in exchange, products of industrial labor representing an equivalent in human effort. See Gilbert C. Fite, *George N. Peek and the Fight for Farm Parity* (Norman, Oklahoma, 1954), 43.

[20] [Peek and Johnson], *Equality for Agriculture*, 2.

[21] *Ibid.*, 3.

[22] *Ibid.*, 5-6.

[23] Sentiment against arbitrary minimum prices was expressed strongly in the national agricultural conference of 1922. See U. S. House of Representatives, *Report of the National Agricultural Conference*, Document No. 195, 67 Congress, 2 sess., 1922. For Henry C. Wallace's concern over "price fixing" measures, see General correspondence (1920's) of the Secretary of Agriculture, National Archives.

price fixing. Besides, Peek looked with disfavor on price fixing, as demonstrated by his efforts as chairman of the Industrial Board following World War I. As a widespread concern was felt over the low purchasing power of farm products, the logical outcome was to devise a plan to recognize these conditions. As a result, a formula was adopted, which in the opinion of the sponsors had nothing whatever to do with price-fixing:

> The formula . . . is merely a means for expressing a pure economic relation of values and for preserving it from, and offsetting, the subversive and disturbing interference of such artificial invasions of economic law, as the tariff, money, industrial and commercial combinations. . . .[24]
>
> The controlling formula is fixed by statute and is thus completely removed from human or partisan control.[25]

This formula was to serve as "a check" on the power of agriculture to regulate the price resulting from adjustment of supply to demand; a check the standard of which was "fair-exchange value."[26]

Washington Debut and Enactment of Base Period Price Parity. In the early days of the Harding administration, the *Equality for Agriculture* plan was taken to Washington to be presented at the National Agricultural Conference which was called to consider the farm problem. Prior to the actual trip, Peek sent a telegram to Secretary of Agriculture, Henry C. Wallace, requesting approval for a meeting to discuss with him, a matter of "paramount political importance," before the conference began.[27] Wallace granted the interview. Peek then mailed to Wallace proof sheets of the equality proposal and stated that General Hugh S. Johnson, Vice President of the Moline Plow Company, and he "jointly worked out the idea of the plan in abstract discussions without considering the application of the tariff or its political aspect."[28] Peek also stated, "We mentioned the idea to Messrs. Howard and Coverdale of the American Farm Bureau Federation . . . [who] asked us to develop it."[29]

Upon their arrival in Washington for the national conference, Peek and Johnson took action to sell their remedy to various individuals and groups. They encountered hesitancy on the part of Secretary of Agriculture Wallace and others about bringing the idea before the national conference, held in January, 1922, because of the tariff aspect of the plan.[30] After several discouraging rebuffs, Dr. Henry C. Taylor, U. S. Department of Agriculture Economist, who acted as Executive Secretary of the Conference, arranged for Peek to appear for ten minutes before the committee on price relations. Peek stayed an hour and a half! Peek then returned that evening to the committee on marketing which unanimously approved the incorporation of a recommendation that the Congress and President of the United States should take such steps as would immediately reestablish a "fair-exchange value" for all farm products with that of all other commodi-

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[24] [Peek and Johnson], *Equality for Agriculture*, 24.

[25] *Ibid.*, 25. Secretary of Agriculture, Henry C. Wallace, stated in 1924 that the McNary-Haugen bill which was based on the Peek-Johnson plan seems "to be free from the insurmountable objections which can be urged against government price fixing or government purchase." At the same time, he also indicated, "Perhaps some way of restoring fair prices for farm products other than that contemplated in the McNary-Haugen bill can be found. The method is not of importance as long as it works." See Henry C. Wallace, *Our Debt and Duty to the Farmer* (New York, 1925), 208.

[26] [Peek and Johnson], *Equality for Agriculture*, 20.

[27] Correspondence to Secretary of Agriculture Henry C. Wallace from George N. Peek, Moline Plow Company, Moline, Illinois, January 17, 1922, National Archives.

[28] *Ibid.*

[29] *Ibid.*

[30] According to Johnson, the fair-exchange value plan did not receive a favorable opportunity for consideration at the national farm conference. In his words: "We went to . . . [Chairman] Anderson with this discussion of the effect of the tariff in view of surplus production on agriculture which had been carefully omitted from his Congressional study. . . . He frankly told us that if we tried to raise this point in that convention, he would steam-roller us—all of which he faithfully and artistically did." See Johnson, *The Blue Eagle from Egg to Earth*, 105-106.

ties.[31] Peek and Johnson also succeeded in obtaining a more sympathetic attitude from Secretary Wallace. On their advice, Wallace called a conference of leading bankers, and industrialists, some of whom approved the plan but most of whom disapproved. Hence, the proposal suffered a serious setback. But all was not lost. Bernard M. Baruch, elder economics statesman, who also attended the conference, believed that the plan offered "power enough," if capably administered, to sustain the purchasing power of American farm products.[32] Not to be dismayed, the equality for agriculture advocates then suggested a conference of economists. After initial misgivings, this conference generally approved the basic idea of their plan.[33]

Peek and Johnson returned to Moline somewhat discouraged but still determined. They soon set to work revising their brief, *Equality for Agriculture*. In reality, they had accomplished more than they had realized by getting Secretary Wallace and others interested. This time they listed themselves as authors and also indicated on the title page that the principles stated in the brief were presented "last October [1921] to Messrs. J. R. Howard, President, and J. W. Coverdale, Secretary of the American Farm Bureau Federation, and they were developed upon their request."[34] The inference was strong that the Farm Bureau had approved. The two laid plans for wider circulation of their brief to gain further support. The second edition was shortened and confined to general problems of the tariff and agriculture. Unlike the first edition, it did not refer to a specific administrative mechanism, the "practical organization," for attaining the principle of equality for agriculture. The mechanism was strongly criticized in the first edition; hence, they deleted this part to secure increased acceptance. Otherwise, the basic ideas were similar, including the base period, 1906-15, as proposed in the first edition.

Included with the second edition was a 7-page memorandum, entitled *Agricultural Prices Compared by United States Department of Agriculture, January, 1921–February, 1922*. The memorandum was prepared by statisticians in the United States Department of Agriculture at the request of Peek and Johnson. The memorandum showed what the price of wheat, corn, hogs, and cotton would have been in 1921 if the farmer had been getting "fair exchange value" as compared with what he received. The base period for the "ratio" price was the 10-year period 1905-14. The actual price of wheat in 1921 was $1.45 per bushel as compared with $1.64 for the ratio price. Accompanying the second edition of *Equality for Agriculture* was a 4-page printed letter on Moline Plow Company stationery addressed "To All Who May Be Interested In Equality For Agriculture," which made a strong plea for the principles as presented "in the form of a brief, copy enclosed, entitled 'Equality for Agriculture.'"[35] According to the authors, the "principles" were sound. They had been "presented to our leading economists and to some of our foremost bankers, industrialists, farmers and businessmen, and have never been even seriously questioned, much less refuted."[36] The authors also asserted that dire consequences would result if the farm problem was not solved. In their words, "no graver question has ever been presented in the economic development of our nation and, unless we as a nation can solve this problem, we can look forward to a progressively

[31] U. S. House of Representatives, *Report of the National Agricultural Conference*, Doc. No. 195, 67 Congress, 2 sess., 1922, p. 171.

[32] Johnson, *The Blue Eagle from Egg to Earth*, 105.

[33] *Ibid.* Taylor and Taylor, *The Story of Agricultural Economics in the United States, 1840-1932*, 583, in disagreement with Johnson, report that the "seminar" with the Bureau of Agricultural Economics preceded the conference with the bankers, industrialists, and others which was held on February 13, 1922.

[34] George N. Peek and Hugh S. Johnson, *Equality for Agriculture* (2nd Ed., Moline, Illinois, 1922), 32 pp.

[35] George N. Peek and Hugh S. Johnson, "To All Who May Be Interested in Equality for Agriculture," Moline, Illinois, April, 1922.

[36] *Ibid.*

depressed agriculture with an alarming tendency toward tenantry and eventually peasantry. . . ."[37]

Following the presentation of the Peek-Johnson plan to the varied representatives in Washington, the Bureau of Agricultural Economics proceeded with a series of studies bearing on various phases of the plan. Their results became evident with new low levels of wheat prices in the summer and autumn of 1923 when the matter was discussed by Secretary Wallace in a cabinet meeting in September and again in November when he addressed the Chicago Association of Commerce.[38]

Wallace then arranged for the drafting of legislation embodying the plan. The preliminary work was done by Charles J. Brand, former Chief of the Bureau of Markets. Following the preliminary work of Brand, the bill was introduced on January 16, 1924, in the Senate by Senator Charles L. McNary, Republican of Oregon, and in the House by Representative Gilbert N. Haugen, Republican of Iowa. The three later bills of 1926, 1927, and 1928 were based on the Peek-Johnson principle of making the tariff effective on exportable agricultural products.[39]

The tendency to shift the emphasis from tariff reform to marketing characterized the evolutionary changes in the McNary-Haugen bills. Emphasis was changed from price raising to price stabilization in the bills; specific references to "ratio" prices were omitted to make concessions to President Coolidge and other objectors; otherwise, the later McNary-Haugen bills were not greatly changed in substance from the first bill. The McNary-Haugen proposals, twice vetoed by President Coolidge, as is well-known, never became law. Meanwhile, a non-base-period parity act, better known as the Agricultural Marketing Act of 1929, which was designed to place agriculture on a basis of "economic equality with other industries," was unsuccessfully tried. Soon thereafter, in the early thirties, the base period advocates renewed their efforts with worsened farm conditions and the approach of another national election. Johnson activated an apparently reluctant Peek by letter in April, 1932, by writing, "This is the time to put over our farm relief. I know whereof I speak. Why don't you get busy?"[40]

Peek replied, among other things, that he had been a private citizen since 1928 and he had not made a single public statement except one before the War Industries Board Association on the previous Armistice Day; however, he did agree to give his "fullest cooperation to a responsible movement which . . . [had] for its purpose a correction of the agricultural situation. . . ."[41]

This time they were not to be denied their goal. In achieving their objective of incorporating the base-period concept into law, they also inaugurated a distinctive designation for their base-period plan which previously the non-base-period advocates also had used on occasion. This designation was "parity."

Why was this identification increasingly manifested at this time for the base-period concept, which had been embodied also in the original McNary-Haugen and other bills? Two noteworthy developments in the early thirties contributed materially in associating the term, parity, with the base-period version of price equality. The first of these developments was the approval by the House Committee on Agriculture of the Jones bill (H.R. 13991), "emergency" legislation that would attract more interest than usual and which included a base-period version of parity. This, in turn, was followed on January 12, 1933 by House passage of the base-period Jones bill, then referred to as "parity." As a result of these events, a rash of controversial discussions broke out, most of which were highly critical of the base-period Jones bill. These criticisms were no doubt intended to prevent the enactment of a

[37] *Ibid.*

[38] Alice M. Christensen, "Agricultural Pressure and Governmental Response in the United States, 1919-1929," *Agricultural History*, 11:37 (January, 1937).

[39] *Ibid.*

[40] George N. Peek with Samuel Crowther, *Why Quit Our Own* (New York, 1936), 49.

[41] *Ibid.*, 49-50.

base-period price act. Instead of attaining this objective, they succeeded to a large extent in associating the base-period expression of price equality with the term, parity. The Senate took no action on the Jones bill. Its defeat was primarily the result of unsettled political conditions during the last days of the Hoover administration; however, a base-period parity act was soon to be passed with the advent of the Roosevelt administration.

The dissenting minority report of the House Committee on Agriculture at the time the Jones bill received Committee acceptance indicated approval of a non-base-period parity approach as opposed to the base-period idea of the Jones bill. The minority members also pointed out that for the "past ten years" the committee had sought to bring about enactment of legislation which attempted to place agriculture on a "parity" with industry.[42]

Although there were obstacles to be overcome, the idea of the base-period price-parity concept as embodied in the Jones bill was included in the Agricultural Adjustment Act of 1933. Except for the base-period standard of price equality (fair-exchange value) or ratio concept, Peek had misgivings about several features of the Jones bill as well as the Agricultural Adjustment Act of 1933. His desire for reliance on marketing agreements and foreign trade adjustments rather than production control, as well as additional reported differences with Secretary Wallace and others, resulted in his resignation as administrator of the Agricultural Adjustment Administration in December, 1933.

Peek's efforts were highly influential in helping the Democratic nominee, Alfred E. Smith, in the farm States in 1928 and in aiding the Democratic candidate, Franklin D. Roosevelt, in his overwhelming victory four years later. Despite Peek's break with Roosevelt and Wallace, he continued to look with favor upon the parity concept. His objections were concerned primarily with its implementation.

The Agricultural Adjustment Act of 1933 referred to the parity concept with such expressions as "equality of purchasing power," "fair-exchange value," and "equivalent . . . purchasing power." Following the achievement of status, even though parity was referred to only by implication in the 1933 act, the base-period concept was to become more widely known as parity, until, in 1938, it was directly incorporated into law. This identification has since characterized the concept so completely that it has come to be regarded as parity, the legally incorporated and long-sought symbol of farm fairness and justice.

Conclusions. For a value judgment to become a cherished concept, a suitable environmental setting must be available. Such a situation was provided with respect to the base-period concept of parity by the depression of the twenties and thirties. Out of the long struggle for farm price relief culminating at that time, the plan that triumphed would appear to be destined to enjoy a singular distinction, unique, if for no other reason, because of the fact that it emerged as the well-known choice from among the many alternatives discussed, sought, and tried over an extended period.

Granting the likelihood of circumstances conducive to its attaining recognition, indications are that parity as we know it today could have been a version other than the base-period concept. This is revealed by the fact that one non-base-period version as embodied in the Agricultural Marketing Act of 1929, which was defined as any price level other than an "excessively fluctuating" or "depressed level," took legal precedence over the base-period concept as embodied in the original Republican-sponsored McNary-Haugen bill, as well as the Democratic-sponsored Agricultural Adjustment Act of 1933. It is evidenced also by the fact that advocates of the base-period idea succeeded only after a close decision for their plan in the 1930's. Furthermore, had the base-period concept been incorporated in the ill-fated Agricultural Marketing Act of 1929, it might not

[42] U. S. House of Representatives, *Agricultural Relief*, Report No. 1816, Part 2, 72 Congress, 2 sess., 1933, p. 1.

have been made a part of the Agricultural Adjustment and succeeding Acts.

The persistence of Peek and Johnson undoubtedly was a significant influence in keeping the base-period parity concept alive, after its innumerable defeats, until finally it achieved legal status. But parity (base-period) has since demonstrated an appeal of its own, more than two decades after Peek and Johnson. It has evolved into a symbol of farm fairness and justice. Legally implemented, it has become and is today, as contained in the Agricultural Act of 1956, a symbol with substance.

Remedial recommendations by agricultural economists for improving our parity programs must recognize the esteem with which the base-period parity concept is regarded. All too often, helpful proposals for improvement become self-defeating by disdainful reference to the parity concept. Recommendations must recognize "as is" value judgments. The validity of this aspect becomes readily apparent when one notes the lack of acceptance accorded the seemingly well-founded economic recommendations on base-period price supports. This was demonstrated dramatically at the awards dinner in 1945 for the prize-winning papers on a national price policy for agriculture contest. One individual, a prominent Congressman, reminded the group that parity was "sacred." It is further demonstrated by the small regard with which the forward price proposals—without base periods—have been received. Finally, it is demonstrated by the slowness with which modified base-period parity proposals have been approved.

A PATRIOT CHIDES EARLY AMERICAN FARMERS FOR RESISTING CHANGE

Prejudice, that great bar to improvement in the arts and sciences, perhaps no where exerts its baneful influence with more mischievous effect than in the practice of agriculture, particularly on this part of the American continent. Our predecessors emigrating from the different European countries, each brought with him the prejudices he had imbibed in his native land, and adopted the practice in this country, that he, and perhaps his forefathers, for ages before him, had adhered to, notwithstanding the great difference of soil and climate absolutely requiring a very different course of conduct. These prejudices acquired strength by time, and practices became venerable for their antiquity: and being accustomed to consider ourselves as the children of the countries from which we descended, of course we looked up to them as the only legitimate sources of improvement; the consequence of which has been, that notwithstanding considerable improvements and discoveries in agriculture have been made in Great Britain and other European countries, we have not derived those advantages from them, which might have been expected. Many of them having been implicitly adopted here, without the necessary variation for the difference in soil and climate, have failed. These unsuccessful experiments have tended to confirm the people of America in their former prejudices, and to induce them to treat with contempt every appearance of innovation in theory or practice.—Thomas Moore, *The Great Error of American Agriculture Exposed.* Baltimore, 1801.

John M. Horner and the Development of the Combined Harvester

F. HAL HIGGINS

At the end of the Civil War, John M. Horner had what amounted to a farm machine factory on his California ranch, to repair, adapt and build implements and machines needed to equip his hand labor. By 1867, he was ordering from the nearest blacksmith and wheelwright shops at Washington Corners (now Irvington) the building of his three combined harvesters. In 1868, he was inviting farmers through advertisements in *California Farmer* to see his harvesters at work in Santa Clara and Contra Costa Counties in public demonstrations.

The background of the California combined harvesters is revealed in letters of Andrew Y. Moore in the *Pacific Rural Press* in 1886 and 1889. Moore headed the Michigan State Agricultural Society Board that picked the site of the first agricultural college in the United States, Michigan State Agricultural College, at East Lansing, Michigan. His story is not only that of an eyewitness who participated, but of the man who sent his machine and son to California to make history for John Horner at Mission San Jose in 1854.

The *Pacific Rural Press*, October 2, 1886, published this letter from Moore, then residing at Tulare, California:

"About the year of 1820, at Utica, New York, John Morgan made an exposé of Freemasonry, and in consequence he was removed and the public never heard of him afterward. John Haskall and others implicated along with him in the exposé thought it prudent to go West. Mr. Haskall came to Kalamazoo, Michigan, and settled there. He was a lawyer, but had no practice; it was hard to make a living. On viewing Prairie Ronde, in Kalamazoo County, a prairie of some twenty thousand acres, seeing that it was good for wheat and thousands of acres uncultivated, he thought if he had a team, perhaps he could hold the plow and put in wheat. He knew that he could not harvest it and there were no men to hire. He spoke of it in the family, and it caused his wife to dream; so one morning thereafter she stated to her husband that she saw in a dream a large machine going over the prairie, drawn by horses and harvesting wheat, describing its appearance and motion. Mr. Haskall related the dream to Hiram Moore (no relation), of Climax Prairie, knowing him to be of an inventive turn of mind. Hiram asked how he would have it operate. Mr. Haskall

John M. Horner in 1854

replied, holding out his hand with fingers extended, he would run it through the grain, and with the other hand draw it over and backward, he would cut it like that. Hiram did not intend to give it much thought, but it troubled his mind for six months, when he concluded he would put his mind seriously upon it and succeed in the invention, perfect as he thought, and made a model of it to send to Washington City [D. C.], exhibited it at the patent office and obtained a patent. This was in 1834. By the harvest of 1835, he, at Flower Field, Michigan, made a temporary machine and went into a field for a trial. It cut about two rods and broke something. The thrasher was not in it; he merely wanted to try the cutting process. In the failure, he said, 'I see the shore far off and it will take me a long time to get there, but I will succeed in time.'

"The next season he intended to perfect a machine for further trial. My brother Abner did the carpenter work, and, I had sowed some wheat when I came to Prairie Ronde in 1835, he asked me to let three acres stand for trial. It being late in the harvest season, so that he could make a fair trial, so I did so, and the harvester cut it and thrashed it in good order, but the cleaner was not yet attached. He asked me to take the time of its work and figure the cost per acre, at the going rate for men's labor and the hire of horses. Twelve horses were worked on the machine at that time, besides the team hauling to the barn. I took the exact time for cutting the three acres, and made the actual cost of eighty-two cents per acre. I inquired of my brothers, who were farmers, as to the cost of harvesting and thrashing in the ordinary way of cradling, raking and binding, shocking, stacking, thrashing, cleaning, etc., and upon strict calculation it cost in that old process $3.12½ per acre. The contrast was so great that I took an active part in its future.

"By the harvest of 1837, it cut only about twenty acres, and he found that it wanted further perfection, although the thrashing and cleaning had been added. Before another harvest, he said to me: "Mr. Moore, I can invent, but I can't drive the horses." I replied that I would drive the horses and would assist him, and I did so each year. In 1841 he invented the Angle Edge Sickle, and it would work all through the harvest without being ground when first in good order. The first sickle was straight, with teeth cut in sections each way.

"In the fall of 1841, Mr. Moore went to Rochester, New York, and procured good mechanics and he completed two machines. I used one for him and Ira Lyons used the other for the harvest of 1842. In the spring of 1843 I bought the Bates farm near Schoolcraft, and moved thereon the last of March. I operated his machine as usual, and in that season had the only complete machine built for myself. It was drawn by sixteen horses, hitched two abreast, walking by the side of the grain, cutting ten feet wide, thrashing, cleaning and bagging the same, doing twenty-five acres a day. I ran it every season till the harvest of 1853, when I sold an interest in said machine to George Leland. We shipped it to California the same year, and it cut over six hundred acres for Henry [?] Horner and Mr. Brifogle [Breyfogle], in Alameda County, in 1854. The next year, Mr. Leland was engaged in mining and did not run the harvester, but for the harvest of 1856, Mr. Leland's son put it in the field and, not being skilled in machinery, neglected to oil it, and by friction it took fire and burned in the field. Thus ended the machinery business with me."

An unpublished letter from Andrew Moore to his son sheds light on the early development of the combined harvester in Michigan, before it was sent to Horner in California. This letter was from Moore's home in Tulare, California, dated March 28, 1886.

" . . . At your request will give you an account of my early operations in farming: I removed from Pottsville, Pennsylvania, to Michigan and arrived at Prairie Ronde, September 12, 1836, and I sowed some wheat in October. Hiram Moore of Climax Prairie had invented, and patented (by model), a harvester that cut, threshed,

One of the Moore-Hascall combines operated in Michigan between 1836 and 1853. A similar combine, shipped to California, was used by John M. Horner to harvest wheat near Mission San Jose in 1854.

cleaned and bagged the wheat in one operation, and made a trial on my wheat in 1836, and made a success in cutting three acres, which I had left late for trial. In 1843, I built a machine for myself and ran it until after the harvest of 1853, when I sold a half interest to George Leland, and he brought it to California and harvested over six hundred acres in 1854. It was the first harvester in California. In 1856, it took fire by friction, for want of oil in the gearing, and burnt up in the field.

"In the spring of 1854, my son Oliver K. Moore went to California with my very superior horse Bucephalus and five others, and, to pay expenses, he contracted to take three men across the plains. On the way, by stampede, he lost two of his best team horses and then had much difficulty in getting there with Bucephalus and two of his colts which matched remarkably fine. The harvester was operated by Mr. Leland . . . and if he had gotten his pay would have cleared about thirty-eight hundred dollars, but the two men for whom he harvested (Horner and Breyfogle) both failed and he lost all. The next year he did not operate said machine, and the second year Leland sold it and I never received a dollar of payment. My son returned from California in the fall of 1855, and with a good deal of ambition, began to farm; but afterwards went into the grain business with Dow, Hurd and Company, in Chicago. . .

"I had three hundred acres of wheat in the year 1845, which was the largest crop grown in Michigan by one man. In the year 1845, I consulted Governor Ransom and Charly E. Stewart about the propriety of organizing a County Agricultural Society. They approved of it and promised to attend a meeting for organization. I got thirty farmers to sign a "call" and had it published to meet at Schoolcraft, January 10, 1846. It was well attended and organized, making me President; William H. Edgar, Secretary, and Samuel Cobb, Treasurer. In October we had a good fair at Kalamazoo.

"A State Fair was organized in 1849. Ex-Governor Ransom was made President for two years; in 1851 Judge Hunt of Detroit was President for two years, and in 1853,

I was elected President for another two years. In 1853, the Legislature of Michigan passed a law creating an experimental and model farm of not less than five hundred acres and within ten miles of Lansing and an agricultural college should be erected thereon. The State Agricultural Society was required to make the selection and build this college. I called the Executive Committee together at Lansing and located a tract of land containing 676 acres, and Samuel Bartlett, one of the Executive Committee, was appointed to build the college, which was finished in one year. The Governor and Legislature viewed it and accepted it with compliments."

As no photographs or United States Patent Office drawings are available today to illustrate the workings of the Horner push combines, it has been difficult to uncover details of construction.

The letter below, from Robert Horner, son of John M., written from his home in Honolulu, Hawaii, in 1930, was accompanied by a penciled sketch of his recollections of the arrangements of the horses. This sketch proves that the harvester was a push-type machine, the first such combine with all the horses behind the machine.

The reason for this arrangement is supplied by E. J. Patterson of Stockton. His father, James Patterson, was a farm hand on the Horner and Beard ranches in 1852 and 1853. A young man when he arrived in San Francisco from his home in up-state New York, Patterson had been a neighbor and schoolmate of one of the thresher-builders at the famous Pitts thresher works at Buffalo, N. Y. He took one incredulous look at the Indian laborers, bent over the fields with the one-hand, crescent-shaped scythes as they harvested the grain and hay crops at the slow rate of a quarter-acre each per day, and thereupon made a deal to use one of the new grain cradles on the basis of so much an acre. Patterson was soon earning four times the ordinary wage. By 1853, Patterson had sold Lyman Beard on the idea of permitting him to build a "traveling thresher." He constructed a huge machine with 18-foot wheels. This machine was started up with 22 mules out in front of the driver. The mules bolted at the noise of the machine when thrown in gear and scattered the brain-child of young Patterson broadcast over the landscape. Undaunted, the ambitious lad built a second machine with wheels merely eight feet in diameter and powered by but 12 mules.

The Michigan crew of A. Y. Moore's son, Kidwell, and partner George Leland, had used a driver walking beside each team of two horses. In California, manpower was scarce for farm work, and with single drivers often handling the jerk lines, runaways were frequent, with resultant loss of time, horses, and sometimes even a man. Thus, hitching the hŏrses behind the machine became the order of the day and brought the "push" harvester.

In his letter, Robert Horner recalls the early Horner combined harvesters and gives his recollection of details of construction:

"The Harvester was run by three men, the driver, who guided the harvester from behind, a man out in front to raise and lower the harvester over uneven ground, and a sewer who sewed up the sacks as they filled and dropped them out on the ground. The horses were hitched up to both sides of a large pole (or rather a timber) about 22 x 12 x 30 feet long, with two or three horses on the side next to the unharvested grain and with four horses on the other side just behind the harvester, three behind the leaders, then two and one horse at the last. The man who was out front guiding the harvester over uneven ground, used a three-ply block and tackle, also directed the machine when the grain stalks were shorter than usual. The block and tackle was one of the distinctive features of the success of the harvester, as the block was of iron with little grooves in the block that would hold the small links of chain. Hence, when the man would raise or lower the cutting part, the links would fit into the grooves of the block and would stay there until the man would pull the chain another way. There was no slipping or need of holding the chain, for it would 'stay put' until it was moved by man.

"The other main feature of the harvester was the cylinder teeth. Father [John M. Horner] had a patented tooth, which the other [harvesters] did not have unless the owners bought them through him, which they did later on. But when the patent ran out, Father did not renew it again but gave it to anyone who wanted it. This tooth was a little different shape than anything in use in that line at that time, and it was for this reason that the other harvesters did not do so well, until they used father's patented teeth.

"Two of the old harvesters were left in the stable yard when we left California in 1879, and men would come from as far back east as New York to take measurements. I suppose that the present-day harvesters are more or less styled after father's machine. . . .

"I have gone a little too fast. The third man on the harvester attended to sewing the grain bags. While he was sewing one sack, the other bag was being filled by the running grain coming in by carrier to his little working room, and after the bag was sewn up, he would chuck it out to the ground. A wagon would come along later and gather up the scattered bags. The waste straw was scattered as the harvester was moving along. . . ."

Charles Howard Shinn, a notable contributor to the agricultural press and a long-time resident of the Washington township area where the Horners farmed, is authority for the statement that Horner built a combined harvester as early as 1859. It cost $12,000, according to Shinn, in his review of California grain farming methods in 1890. This Shinn statement apparently does not refer to the Strong & Taylor Combine that harvested Horner's own and his neighbor's grain fields in 1858.

The above-quoted recollections of Robert Horner do not pin down an exact date for the first Horner-built combines. But the Day Book of the machine-shop of A. O. Rix, for the years 1867-1869, prove that this wheelwright shop and its next-door blacksmith shop, operated by H. Crowell at Washington Corners, were building combines under the direct supervision of John M. and his brother William Y. Horner.

Front-page news items and advertisements in 1868 issues of *California Farmer* bear additional testimony that the Horners built and held public demonstrations of their three combines in the harvest of 1868.

Hiram Moore with his grain drill in Wisconsin, sometime during the 1860's.

Following are 1867 entries from the A. O. Rix Day Book now in possession of his granddaughter, Mrs. Beatrice Davies of Centerville, California:

March 25	W. Y. Horner, $45.50
April 13	J. M. Horner, $9.00—W. Y. Horner, $10.00
May 31	Horner & Co., 39 feet ash and sawing and work on machine, $12.05; Horner & Co., work on Harvester, $5.00
June 3	J. M. Horner, cash, $50.00—J. M. and W. Y. Horner, 15 foot ash, $3.00, sawing, $4.00
June 24	J. M. and W. Y. Horner, 26-foot ash and sawing, $5.90; 4-foot ash and sawing, $6.55
June 29	J. M. and W. Y. Horner, 9-foot ash, sawing 10 feet Oregon, work on Harvester, $4.85
July 3	Work on Harvester, $5.00
July 9	J. M. and W. Y. Horner, work on Harvester, $5.00
July 10	J. M. and W. Y. Horner, iron, $2.25; W. Y. Horner, fork handles, $1.50; J. M. and W. Y. Horner, work, $5.00; 15½-foot belt, $15.25
July 11	J. M. and W. Y. Horner, work, $6.50
July 15	J. M. and W. Y. Horner, work, $25.00—wire, $5.00 23 feet hickory, 20 feet ash
July 17	Pulley and drum, $20.85
July 18	J. M. and W. Y. Horner, work on Harvester, $5.00
July 19	J. M. and W. Y. Horner, 15-foot ash and work, $15.00
July 20	J. M. and W. Y. Horner, work and 2 pulleys, $2.75
July 22	Elevator cups, 12-foot belt, rivets and work, $5.00, $27.87
July 23	J. M. and W. Y. Horner, work and drum, $10.50
July 24	J. M. and W. Y. Horner, work on 39-foot belt, 7 pulleys, $17.09
July 25	J. M. and W. Y. Horner, 10-foot ash and work, $12.50—8 pulleys and leather, $25.00
July 26	J. M. and W. Y. Horner, work $12.50—24′ 3″ belt, 27 slats, 9 rollers, 5 screws, thirty-four 3-foot pine, work, $10.00—6-feet zinc, 8 feet ash, springs, $88.20
July 29	J. M. and W. Y. Horner, work, 23′ ¼″ Oregon, 2 pulleys, lathes, $45.50
July 30	Work, $12.50—Oregon lumber, 26 feet pine, $26.94
July 31	Horners, work, $2.00
August 2	Horners, screws $12.00—21 feet ash and work, $5.00—42 feet pine, $7.50—total $32.90
August 5	J. M. and W. Y. Horner, work, $10.00—screens, 91 feet pine, put on bin, work, $12.50—total $40.35
August 7	J. M. and W. Y. Horner, work, $10.00
August 8	J. M. and W. Y. Horner, work, $7.50
August 9	J. M. and W. Y. Horner, work, $12.00—rollers, $2.00—4 springs, $2.00—trees, $2.00—Pine, total $39.30
August 14	J. M. and W. Y. Horner, work, $5.00—4 feet leather, $1.50—20 slats, $1.00—rivets, $.50—tire frame, $2.50—work, $1.00—2 pulleys, $1.50
August 16	Work, 12 feet pine, 10-foot belt, $3.00—total $5.70
August 20	Repair pulley, $3.00
August 23	Harvester work, $10.00—13 feet ash, planing, etc., $5.00—six feet ash, $12.00—work, $7.50, $42.50, $17.50, $12.30—Total, $72.10
August 26	Work, $7.50,—24′ ash, $4.80—$72.11—2 pulleys, $3.00—2′ belt, $2.25
August 27	Harvester work, $12.50—68′ ash, $3.10
August 28	Work, $17.50—25′ ash—total, $48.60
September 6	Work, $30.00
September 9	Work (two days) $10.00
September 10	Work (one day) $5.00
September 11	Work (one day), $4.00—repairs on pulley, $2.25—9′ pine, 90¢
September 13	Harvester work (three days), $15.00—work (2½ days) $12.50
September 14	Repair, 2 sieves, $2.00
September 16	Repair belt, $2.00—fix pulleys on wheel, $15.00—Harvester work (1½ days), $7.50
September 19	Harvester work (two days), $10.00—8 pulleys, $4.00—4 x 6 axle, $3.50—wheels, $18.00—12′ straw belt, $26.75,—work $14.00
September 20	Work, $17.50—15′ ash, $3.00—header belt, 24′, $20.00—work, $16.50—12′ of 3″ belt, $3.60—elevator cap $5.00—total, $127.35
September 23	J. M. and W. Y. Horner, Harvester work, $15.00—16′ ash, $3.20
September 24	Work (2½ days), $20.50
September 25	Galvanized iron, $1.50
September 27	Harvester work, $15.00
September 28	Work, $12.50—Elevator cups, $5.00—18′ 3″ belt, $6.60
September 30	Harvester work, $7.50
October 1	Harvester work, $7.50
October 2	Work, $10.00
October 3	Work, $15.00—64′ pine, $26.06—Oregon 132′, $6.60
October 15	J. M. and W. Y. Horner, pitman lever, $2.00
December 12	J. M. and W. Y. Horner, 2 sets trees, $2.00
December 18	J. M. and W. Y. Horner, 2,000-gallon tank, $40.00

Andrew Y. Moore and sons. When Moore sent his combine to California, by sea around Cape Horn in 1853, his son, Oliver K. Moore (seated left) made the journey there with horses to operate it, driving them overland from Michigan to Mission San Jose.

The news section of the *California Farmer* for August 13, 1868, carried this item:

We take great pleasure in calling the attention of Harvesters of Grain everywhere, to the announcement of the Messrs. Horner, the Inventors of the new Monitor Machines, which they propose to put on trial for the benefit of Harvesters, as per advertisement this week in the Farmer.

Here comes another *Revolutionizer in Labor*, and one that will work wonders in the grain fields and save millions of dollars to our Farmers and to the State annually.

Farmers should, by all means, go and see these Implements operate; it will be worth travelling hundreds of miles to see, and it is for *their own interest*, too, to see it work. Messrs. Horner deserve great honor for their invention.

These news items appeared in the same issues in which the Horner brothers placed their advertisements announcing public exhibitions of their machines. The issues of August 13 to August 27, 1868, carried this advertisement:

N O T I C E !

There will be a public demonstration of the

TRAVELING HARVESTER,

Monitor No. 2,

Upon the farm of Richard Threfall, in Livermore Valley, Murray Township, Alameda County, on

THURSDAY, August 28, 1868

Commencing at 1 o'clock, P. M.

On Thursday, the third day of September, commencing at the same hour, Monitor, No. 1 or 3 will be exhibited to the public upon the farm of William Y. Horner, near Mission San Jose, Alameda County

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We claim that one-half of the expense of harvesting would be saved to the Farmer by using the Harvester; in fact, the entire expense of Threshing is saved.

Three men and twelve horses have Cut, Threshed, Cleaned, and Sacked, in good work-man-like manner, fifteen (15) acres of grain per day—making five acres per man—a feat, we believe, never performed in America before! One and three-quarter (1¾) acres to the man, working with the most approved machinery is about the highest figure yet reached—one acre per man being nearer the general average.

FARMERS!

Come and see if our claims are well founded.

John M. Horner
William Y. Horner

Another advertisement reads:

N O T I C E !

There will be a public demonstration of the

TRAVELLING HARVESTER
MONITOR,

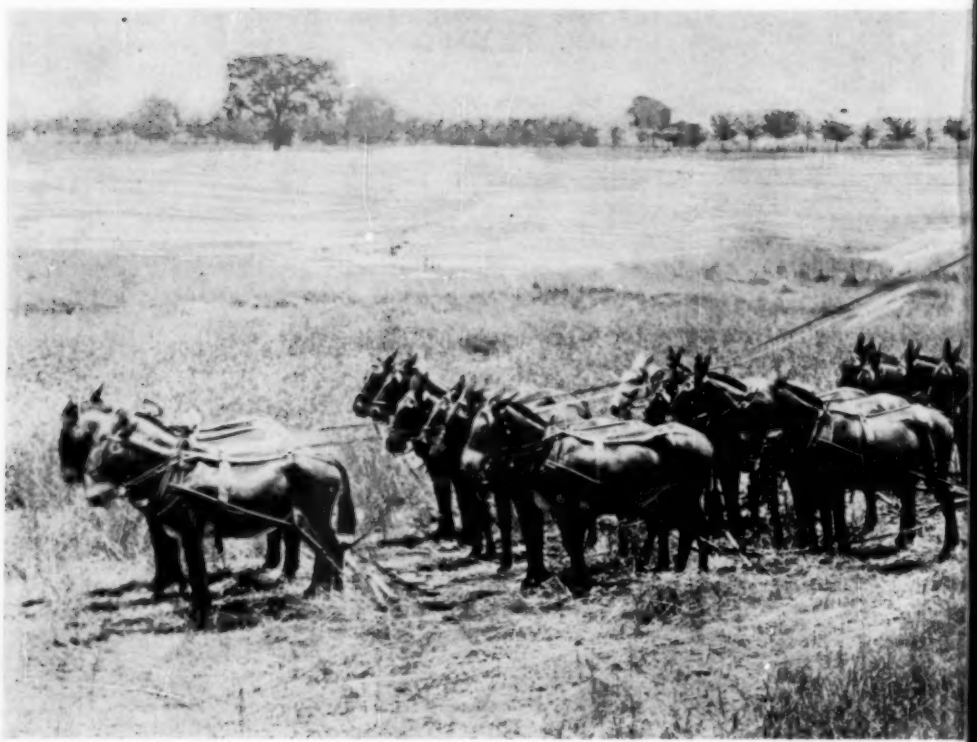
On Thursday, the third day of September, commencing at 1 o'clock P.M., Monitor No. 1 or 3 will be exhibited to the public upon the farm of William Y. Horner, near the Mission San Jose.

Horner's was probably the first advertised demonstration of a combined harvester in history, although many had gathered in impromptu groups to see Hiram Moore's harvesters in west Michigan, from his first trials in 1836 until he left to farm in Wisconsin in 1852.

All these pioneer inventors east of the Rockies, from Lane's 1828 patent obtained in Maine, to others in Tennessee, New York, Vermont, Michigan, and Illinois, never progressed beyond the efforts of the inventor-builder-operator stage. At this point these early experimenters ran up against a combination of obstacles: Weather, stumps, uneven terrain, size of farm to be worked, lack of enough animal-power in one farmer's hands to operate such a machine, and the slower tempo of farm life in older grain-growing states. But perhaps the deciding factor in California's success was the philosophy of living that developed in the gold-rush climate of California, with its young, daring, eager-to-get-rich population that had plenty of room to cultivate and long distances to market. The Horner public demonstrations definitely propagated the idea over the booming grain market period at the close of the Civil War as the disbanded armies of restless young men came west to find farms, homes and fortunes.

The following letter from Horner to his old friend Col. Warren in the *California Farmer*, July, 1869, indicates that the Horners encountered problems from labor fearful of loss of its old style jobs:

I had intended writing to you long since, but found no time until now. You will see by the enclosed Reward [Horner placed an ad, offering $500 for information leading to the apprehension of harvester incendiaries] that one of our harvesting Machines was wantonly burned by some one unknown.



When we built the first Machine, and demonstrated to our own satisfaction its capability, we unhesitatingly stated that one-half of the present expense of taking off a California Harvest could be saved to the producer by that mode, and we were only laughed at.

But this year we took three Machines forty miles from home, and entered the Harvest among the best class of Reapers, Headers, Horse and Steam power Threshers that the State affords; and have fully demonstrated to all critical observers, that our former declaration was correct, and we had thought that such results produced by any machine would be hailed by all men with delight.

But we were brought more particularly to reflect upon our position by the burning of one of our Machines, on the night of the eleventh [of July].

We ask ourselves: Have we injured any one so that personal vengeance is pursuing us, and this burning was done to gratify a revengeful feeling?

No. We have had no misunderstanding with anyone, in fact, not an enemy in the world, a conscience void of offense to all men.

We entered that neighborhood to perform *honest labors*, and harvested sixteen acres in a good workman-like manner, to the entire satisfaction of our employers—so much so that most of them wanted us to consent to harvest their next crops.

We again reflect that expressions like the following have from time to time come to our ears:

"If this man allows that Machine to go into his fields, he had ought to have his grain burnt."

"If them Machines (meaning the Monitors) are allowed to go ahead, it will be as difficult to get a day's work in Harvest as at any other time."

"I have owned Headers for three years, and I have watched those Monitors closely, and I believe do just as good work as we do, if not a little better, and I think they bag on an average of fifteen acres per day." Others say, "D - - n the Monitors, but I don't feel so. Yet we can't compete with them, and our only show is not to buck against them, but to accept the improvement and help it along."

And one Farmer says: "You must promise to come and cut our crops again next year."

Another says, "I won't have another machine in my field if I can get a Monitor."

Still another, "If *you* will harvest my grain, I shall have something left after paying you, but if I get anyone else to do it, I will get nothing."

A further development of Horner's pioneer work with the combined harvester. A Shippee model of 1884, pulled by twenty-one mules.

We have heard many other singular expressions—some of them irritating to opposing interests, though gratifying to us.

We are led further to reflect that old and established interests are at stake, and that the "Great Goddess Diana," or Fogyism, is being spoken against, etc. . . .

Colonel Warren editorially commented in the California Farmer of July 29, 1869:

We spoke last week of the most villianous act of the Incendiary, who destroyed the New Harvester of Mr. Horner where it had been at work in Contra Costa. A reward of $500.00 for the Incendiary is ordered, as will be seen by an advertisement in our columns.

It is to be hoped that the Farmers in that vicinity will make every exertion to ferret out the wretches (one or more) for unless a suitable punishment is inflicted *now* at the beginning of such outrages, not only Harvesters, but Hay and Grain Ricks and Barns and Houses will go next.

Such acts as the one named, upon a man like Mr. Horner, because he had invented a labor-saving Machine, should arouse the spirit of the Lion among all good men, and they should unite and hunt up the offenders, and make them feel the heaviest penalties of the law for damages, and then be driven from every civilized community.

We wish to correct the error of printers in the Report of the work of this wonderful Harvester. The types said (it) harvested "sixteen acres." It should have been *sixteen hundred acres.*

That other far-sighted editors agreed with Col. Warren is seen in the pages of Dewey's *Mining and Scientific Press* of July 31, 1869:

An improved harvester was invented some time since by Mr. John M. Horner, of Mission San Jose, by which a great saving of labor is effected. This harvester cuts, thrashes and sacks the grain, at one operation. Three of these machines have been actively engaged in the field, this season, against the best class of reapers, headers and steam thrashers in the State. It is said that they have demonstrated to the most critical observers that they are fully able to accomplish all that has been claimed for them. Sixteen acres can be harvested by this machine in one day.

This success which, it was thought, would have been hailed by all men with delight, seems to have produced quite a different feeling upon the hands engaged in farm work in the vicinity; and various threats were thrown out to the effect that such machines should not be allowed to work, etc., because they interfered with the demand for labor. But little attention, however, was given to such threats until the fourteenth instant (July 14, 1869), when one of the machines was consumed in the night, and under circumstances which rendered it all but conclusive that it must have been set on fire by some of the parties who had been threatening or prophesying violence. It is to be hoped that the parties who could be guilty of such an act may be found and punished, in order that villainy may have its reward and the innocent be freed from suspicion.

Such acts, taken in connection with the late high-handed proceedings in San Jose, Grass Valley and White Pine, may well set sober men to thinking upon what evil times we may have fallen. When men are banding together to subvert the principles of justice and right, or when men are forming associations whose influence leads directly and naturally to such results, is it not time that those whose lives and property are thus jeopardized should take some united action to protect themselves against such attacks?

In the *California Farmer* of August 12, 1869, Col. Warren deplores the "cowardly" incendiaries:

It should not be forgotten that the New Harvester Monitor, which was lately destroyed by some coward-hearted Incendiary, who reckless of all consequences, sought vengeance upon a man whose only error in his sight was that he had made a "Labor-Saving Machine."

Let every good man in that vicinity unite with the Messrs. Horners to ferret out the guilty parties, for no property is safe when such criminals live in the county.

Horner's ad in *California Farmer* of August 19, 1869, reads:

$500.00 reward will be paid by the undersigned for the arrest and conviction of the person or persons who caused the burning of Monitor No. 2 in Mr. Wilder's field, at the point of timbers, San Joaquin Valley, Contro Costa County, on the night of July 19th, 1869.

(Signed) John M. Horner
William G. Horner
William Horner.

Such a set-back to Horner's efforts to stage a comeback on the rising Civil War grain markets was a heavy blow. His harvesters cost him $10,000 each, according to Shinn. The Rix entries for their construction seem to prove this cost, even though skilled labor was only $5 a day. But Horner's use of his three machines with advertised public demonstrations quickly spread the combined harvester idea. By this date, all the big grain growers, blacksmiths, machinists and farm machinery manufacturers in the grain growing areas were watching, copying and adapting. John Horner's quarter-century of use and development of this machine, from 1854 to the time he left his two machines in the shed at Washington Corners in 1879, paved the way toward eventual mechanization of all American agriculture.

ADVICE FOR YOUNG SOUTHERN RURALISTS OF 1844

To select a good husband—Let the man of your choice be one who is punctual in his promises, and is industrious, sober and frugal. He should not smoke cigars, read "fashionable" books, or visit balls and theatres. Let him be dignified and have common sense, and all is well.

To select a good wife—Choose a woman who has been inured to industry, and is not ashamed of it. Be sure she has a good constitution, good temper, and has not been accustomed to "*dashing*" without knowing the value of the means, is not fond of novels, and has no giddy and fashionable relations, and you need inquire no further—*she is a fortune.—Southern Cultivator*, Augusta, Georgia, 1844.

*Organized Leadership and Agricultural Technology in Modern China**

CHAO KUO-CHÜN

Students of Modern China often ask the basic question: After Western technical knowledge and tools had been introduced into China, what were the primary factors which accounted for her agrarian stagnation during the crucial hundred years between the 1840's and 1940's? It would be impractical to discuss in one article all the points relevant to this complex question. One must select a key issue as a focus for discussion. Since technological development is ultimately decisive to the increase of agricultural production and productivity, it deserves primary attention. Even to this limited subject, there are many possible approaches—economic, political, social, or psychological. This article aims to describe and analyze organized leadership as a basic and often decisive factor in the development of agricultural technology in Modern China.

The Low Technical Level of Agriculture in Modern China. Farming technology in Modern China, by Western standards, was both backward and stagnant. It never broke out of its traditional framework. At the dawn of the twentieth century, many basic technical innovations in agriculture had already appeared in the West. By 1798, Thomas Jefferson had perfected several kinds of plough. In 1804, Francois Appert introduced hermetic sealing for food preservation. In 1834, the McCormick reaper came into existence, and in 1837 John Deere's steel plough was invented. Chemical fertilizers were successfully manufactured by Baron von Liebig in 1840, and finally, in 1900 Benjamin Holt welcomed the birth of a new century with his tractor. Chemical fertilizer was introduced into China in 1905, and many other modern farming techniques and tools were by then known or available. New crops—peanuts, sweet potatoes, and maize (corn)—had been introduced into China as early as the sixteenth century. But what was the general level of agricultural technology in China three decades after 1905?

Professor Ch'iao Ch'i-ming of Nanking University, writting in 1944, described the 43 basic farm tools used by the Chinese peasants as "undeniably primitive" and remarked that "the agricultural technique in China has had little significant change since the T'ang Dynasty."[1] Rural studies conducted in the 1930's by Chinese and Western agronomists revealed the following facts: Both farm animals and crops were badly infected by pests and disease. As a result, pre-war China each year lost about a quarter of a million ton of cotton, or 30 per cent of her total pre-war annual production, and some 12 million tons of food crops—more than 8 per cent of her average annual grain produce. The loss in rice production alone, which was caused by a moth-like insect, *Iarthesia chrysographella,* exceeded 2.2 million tons in an average year; the amount damaged was more than double the 800,000 tons of rice which China had to import anually be-

* This is a revised version of a paper presented at the 8th Annual Convention of the Far Eastern Association at Philadelphia on April 5, 1956. The author is grateful for the suggestions made by scholars on Modern China at that time and subsequently. "Modern China" here refers to the period from the 1840's to the 1940's—or, more specifically, from the Opium War (1840-1842) to the establishment of the People's Republic of China on Oct. 1, 1949.

For a study of the rapidly changing scene in China's agriculture during the past eight years, see author's *Agrarian Policies in Mainland China: A Documentary Study, 1949-1956* (Harvard University Press, 1957).

[1] Ch'iao Ch'i-ming, *Chung-kuo nung-ts'un she-hui ching-chi hsüeh* (Socio-economic Studies of Rural China) (Shanghai), 324.

tween 1933 and 1937. Fifteen per cent of the cattle and water buffalo, 20 to 25 per cent of the hogs, and 60 per cent of the poultry died of infectious diseases each year.[2] Lossing Buck estimated that through pest control, crop yield in China could be increased by 10 to 20 per cent. Gerald Winfield held that the use of improved crop strains would raise production at least 10 per cent.[3] Shen Tsunghan, author of *Agricultural Resources of China*, wrote that the application of sufficient chemical fertilizers might enhance yields by 25 per cent or more.[4] The vast losses in produce damaged or unrealized were further increased by such agricultural defects as poor soil conservation, defective storage and other marketing facilities, the lack of an extensive afforestation program, ineffective flood control, and inadequate research and education on farming techniques.

To point out the low level of agricultural technology in Modern China is not to deny the achievements of the Chinese peasantry in many aspects of farm work. But the significant facts were the lack of noticeable progress in agricultural technology, the higher yields of many crops in other countries, and the much greater productivity potential that could have been gained through the adoption of modern farming technique and other reforms.

In the period from 1929 to 1933, the average yield of rice in China was only 60 per cent of Italy's; that of wheat, 48 per cent of Japan's; and that of potatoes, 40 per cent of Great Britain's.[5] The average yield of rice per acre in the United States in 1949 already surpassed that of China (2202 lbs., as against 2141 lbs.). As to labor efficiency, another criterion in measuring technical progress, it has been estimated that in the 1930's, one adult male working one year on a Chinese farm produced an average of 3,080 lbs. of grain, while his American counterpart was producing 44,000 lbs., or 14 times as much.[6]

Organized Leadership and Technical Development in Agriculture.

1. Organized Leadership in the Political Sphere. The first major political impediment to technical agricultural progress in Modern China was the absence of an efficient administration, at both the national and local levels. This factor is generally recognized, but its full implications are often underestimated in the West, where effective governmental control over its territory has been taken for granted. In Modern China, with its high illiteracy rate, its meager private capital, its underdeveloped village self-government, and its strong traditional values, the government's role was doubly important in initiating and developing technical change in agriculture. During the crucial hundred years preceding the Second World War, however, the impotence and political myopia of the leadership in China not only resulted in a lack of any positive reforms in agriculture, but it also permitted frequent disturbances caused by both external and internal forces, which further reduced the peasant's capital as well as his incentive for improving farming techniques. It has been estimated that between 1842 and 1911 China made indemnity payments 110 times. While the total national receipts in 1900 were about 90 million taels of silver, the Ch'ing government had to pay 200 million taels to Japan as indemnities from 1895 to 1900. Between 1914 and 1918, more than 477 civil hostilities were waged in China. The expenditure of warlords in Szechuan province in 1930 was about four times the amount budgeted for hydraulic engineering for the entire nation.[7]

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[2] Data quoted from T. H. Shen, *Agricultural Resources in China* (Ithaca, 1951) 312, 64, 65; and Wu Fu-cheng, "Insect Pest Control in China," *Chung-nung Yueh-k'an* (Monthly of the Farmers' Bank of China) 5 (4): 92-102 (April 30, 1944).

[3] Gerald Winfield, *China, The Land and the People* (New York, 1948) 293, 45; J. Lossing Buck, *Land Utilization in China* (Chicago, 1937), 4.

[4] T. H. Shen, op. cit., 39.

[5] Quoted in Kai-ming Ch'iu, "Agriculture," in H. F. MacNair, ed., *China* (Berkeley, 1946), 471.

[6] G. Winfield, "This Is China," *New York Times Magazine* (Jan. 9, 1949), 9-10.

[7] T'ang Hsiang-lung, "How the Indemnities Were Paid before 1911," *Collected Works on Economic History of Modern China*, 3(2): 262-291 (Nov., 1935); and *Chinese Yearbook 1936-37* (Shanghai, 1938), 1376.

Other by-products of weak government were unprincipled local officials, ineffective rural programs, and inadequate agricultural research and technical education. A few specific cases will illustrate the influence of political leadership on agricultural technology. In the 1930's, under the sponsorship of the National Economic Council, a canal some 30 miles long was dug near Ningsu in Inner Mongolia, which opened up 13,000 acres of cultivable land. Immediately, high military and government officials moved in and divided among them the newly reclaimed area. At about the same time, in the Yunting Canal region in Ninghsia province, less than one per cent of the irrigated land came under cultivation because peasants were driven away by exorbitant taxes.[8]

Peasants in Modern China often had to endure destructive wars and banditry several times a year, in the course of which many crops and much property, draft animals in particular, were lost. It was reported that during a civil war in 1929 in a single county of Shensi province, more than 500 animal-drawn carts were commandeered. At the same time, the Military Commander at the provincial headquarters in Sian proclaimed: "We would rather walk until we die than touch a single wagon of the people."[9] Young men were impressed into the army or into labor gangs, and onerous military requisitions were imposed on the people. For example, during the seven months from April to October, 1930, the average burden of military requisitions in each district of the fighting area in eastern Honan province was 40 times greater than the principal land tax.[10] From October, 1930, to March, 1931, although there was no actual fighting, each of the four districts in Southern Shansi province had to furnish articles to the value of 200,000 U. S. dollars. This sum was the equivalent of 2,200 per cent of the regular land levy. Moreover, it was notorious that many peasants in Szechuan province in the twenties had to pay land taxes more than half a century in advance.

Another important factor was that the programs in Modern China which aimed to improve farm technology lacked practical leadership. The planners and executors of these projects were for the most part urbanites who often lacked understanding or experience regarding the specific needs, capacities, apprehensions, and aspirations of the villagers. Failure was due partly to an indiscriminate attempt to apply Western technology to Chinese agriculture, irrespective of cost or local conditions. Many practical approaches, like grass-roots contacts, public participation, technical demonstrations, and utilization of traditional values and symbols, which are essential in agro-technical programs, were often ignored. Also as a result of organizational deficiency, much of the useful farm knowledge and skill which had been developed by the scientists and Chinese farmers was not properly utilized or popularized. For instance, after a decade of research, Dr. Claude Heman Barlow, an American missionary who came to China before the First World War, discovered the fluke-worm, which constituted a major threat to the peasants' health in Chekiang. In his devotion to his task, Barlow had pursued his research even when on furlough; he swallowed 35 live but sterilized fluke-worms so he could continue his study of their life cycles at Johns Hopkins. In 1925, Dr. Barlow published a detailed report, suggesting a number of inexpensive and simple steps for coping with the parasite. But more than 20 years later no concerted effort toward controlling the disease had been made.[11]

2. Organized Leadership in the Economic and Technical Sphere. Some of the major organizational aspects of Modern China's agrarian economy which hindered technical development were related to the land system. The tiny Chinese farm, averaging 3.31 acres in the thirties, as compared to America's 157 acres, was further split into an average of 5.6 parcels.[12] Such small

[8] *Agrarian China* (New York, 1939), 31-36.

[9] Feng Ho-fa, *Chung-kuo nung-ts'un ching-chi tz'u-liao* (Source Materials on the Rural Economy of China) (Shanghai, 1935), 149.

[10] "Military Requisitions and Peasantry," *Agrarian China*, 101-109.

[11] Winfield, *China, The Land and People*, 123.

[12] Buck, *Land Utilization in China*, 267.

farms often made the adoption of modern agricultural techniques impractical, both because of the physical limitations and the weak economic position of such minute holdings. One American agronomist wrote that "the agricultural production and wealth per capita of China could be increased from 60 to 240 per cent if, by some magic, the average size of all Chinese farms could be raised to 13 acres."[13] The amount of per capita farmland in Modern China could not be increased over-night, but operational methods, such as cooperative farming, could have been promoted through an organized leadership. Another obstacle in the land system of Modern China which prevailed among more than a third of the peasant population was the tenurial practice. The rent, which took away 45 to 60 per cent of the principal crops, the insecurity of tenancy, the numerous services and tributes exacted from the tenants by the landlords and their agents, absentee landlordism, etc., all helped to reduce the tenants' incentive to improve farming techniques and also their capacity to invest. A Chinese expert pointed out that one of the three major factors which discouraged a

[13] Winfield, *China, The Land and the People*, 279.

departure from the one-crop system in many areas in China was "a tenancy system that generally requires the payment of land rent in rice."[14] On the other hand, some tenants extracted all they could from the leased land by applying stimulant fertilizers, or by planting special crops which exhausted the soil quickly; they would then return the barren land to the owners.[15] The failure to effect tenurial reform in Modern China, and the often irrational use of the rents collected, were again due primarily to the lack of organized leadership.

The damaging effect of Modern China's agricultural system on the development of farming technology resulted not only from the abusive nature of the taxes, but also from their bad administration. For instance, in the late 1920's in Kiangsu province, two surtaxes were collected: one under the heading of "irrigation" and another under "road building." The undesirability of this lay not in the fact that two taxes were imposed, but in the fact that no dam or road was ever built. Moreover, these taxes were levied in spite of crop failures. Another report revealed that during the twenties in the provinces where opium cultivation was legalized, peasants who wanted to shift from poppy-growing to crops, due to a decline in opium price, were forced to pay a fine equivalent to the amount levied on the opium poppy field. This fine was labelled "the lazy-bones tax."[16]

Technical retardation in the agriculture of Modern China also came from defective land utilization and management. Many hilly acres which were under cultivation would have been profitably used for grazing or forest land. The indiscriminate reclamation of hilly land resulted in the eventual damage of the low lands. A survey made in 1935 showed that one type of plow and a toothed harrow were both used on the Yangtze Plains for similar work, although the former was five times as efficient, and operated at half the cost per acre.[17] Even such basic things as measures and weights were usually not standardized within a rural district, and no data on agricultural conditions were collected extensively and consistently.

A number of organizations, if efficiently administered under capable leadership, would have helped to foster improved farming technology in Modern China. These include credit and marketing cooperatives, village extension projects, cottage and handicraft industries, and training classes on agricultural technique. With a defective organizational framework, even increased agricultural production through technical reforms could paradoxically result in harm to the peasants. This was amply demonstrated in China in 1932 when peasants in Eastern China suffered heavily due to bumper crops which precipitated a 40 per cent drop in the price of rice—from 13.5 yuan ($4.5) a picul, i.e., 110 pounds, to 8.5 yuan ($2.8) a picul. Simultaneously there was a shortage of foodstuffs in other areas.

Careless application of technical projects in farming without proper leadership often led to ineffective or disastrous results. For example, irrigation, when indiscriminately introduced to saline soil, only rendered farming unprofitable. Many attempts to improve agricultural technology, implemented without taking into consideration the particular local conditions such as the farming practices, food habits, and financial ability of the villagers, ended in failure in Modern China.

3. Organized Leadership in the Social Sphere. In traditional rural China the locus of power lay, either directly or indirectly, in the landed gentry. Often its members regarded themselves as the jealous guardians of tradition, and were generally suspicious of new ideas and methods.[18] The clan and familial organization in Chinese villages in some ways also constituted an

[14] Shen, *Agricultural Resources in China*, 150.

[15] For example, some tenants in East China applied ammonia sulphate to alkaline rice paddies and returned the land after a few years to the landlords after exhausting the soil.

[16] Ch'en Kung-lu, *Chung-kuo chin-tai shih* (History of Modern China) (Shanghai, 1935), 809.

[17] Ch'ao Ch'i-ming, *Chung-kuo nung-ts'un she-hui ching-chi hsüeh*, 226, 338.

[18] See Fei Hsiao-t'ung, *China's Gentry* (Chicago, 1953).

obstacle to agricultural progress, because the patriarchal heads, who had undisputed authority over the more enterprising youth, were in general conservative and unenthusiastic about new farming experiments. Even the school system served, in some respects, as a hindrance. Frequently, both the teacher and the curriculum were symbols of archaism. Little modern farming knowledge or skill was introduced to the peasant boys; nor was dietary or sanitary information disseminated. In the *Yu-hsüeh chun-lin*, or the Gem Primer, the chapter entitled "Techniques" concluded with this statement from the *Analects* of Confucius: "Although these minor skills have some functions, they are useless for weighty tasks, and should not be taken up by a gentleman!"

The traditional Chinese village structure also contained a number of backward and pernicious systems and practices. The unfavorable effect on agro-technological progress of such magico-religious elements as the temples, fortune tellers, and witch-doctors was quite serious. When there was a drought or flood, many peasants went to the temples to appease the "Dragon King," instead of taking preventive or remedial measures. When insect pests became inordinately destructive, farmers burned incense at the temple of "Great Emperor Chang," or, as in some Kiangsu villages, beat a "bewitching woman." The village gambling houses and opium dens further reduced the financial resources of the peasants. The elimination of wasteful ceremonial expenses alone might save from five to seven per cent of the farmers' budget for agricultural improvement.[19]

It is true that "socio-psychological factors are basic to the improvement of farm technology in an under-developed country." A practical leadership, however, can often find ways to bypass or even utilize those cultural factors which obstruct technical improvement. As a concrete example, due to clan structure and the traditional emphasis on "modesty," some peasants were often unwilling to bag top prizes too many times in such contests as farm animal shows or agricultural product exhibitions. But such practical methods as increasing the number of prizes and offering group rewards were found effective in resolving these social problems prior to the implementation of long-range educational measures.

Concluding Comments. It is not intended to minimize the importance of what we might call the non-organizational factors which contributed to the stagnation of farming technology in Modern China. Many organizational and non-organizational factors were closely interrelated and even mutually causative. But in the author's opinion, in an under-developed country like Modern China, it is more practical and more effective to assign primary emphasis to organized leadership in attempting to break many vicious circles. A few illustrations will help to elucidate this premise.

It is often assumed that the rural populace's lack of capital was a primary factor accounting for the vicious circle of Chinese farming. But how could there be any sizable accumulation of capital by the agricultural sector in Modern China when warlords, bandits, landlords, and unscrupulous officials not only squeezed the peasants dry of surplus, but also kept most of them in perpetual indebtedness? Furthermore, with a progressive political and social leadership, many technical improvements, such as conservation, reclamation, afforestation, better use of local fertilizing materials, more effective farm organization, and greater farmland utilization would have required little capital investment. Japan, during the same hundred years between the 1840's and 1940's, achieved far-reaching progress in farming technology after effective institutional reforms, and by relying mainly on domestic resources in accumulating capital. The total amount of foreign investment in Japan in 1931 was some 40 per cent of that in China (3.24 billion U. S. dollars for China, and 1.27

[19] For details see Feng Ho-fa, *Chung-kuo nung-ts'un ching-chi tz'u-liao*, 51-56; Buck, *Land Utilization in China*, 468-470. Dr. Buck reported the average expenditure for funerals, CN$ 127, birthdays CN$ 63, dowries CN$ 96, while the average annual income of the farm family investigated was CN$ 400.

billion U. S. dollars for Japan.)[20] Present-day India is another example. Since her independence in 1947, which made possible a popular national leadership, her effort to improve agriculture has resulted in a 22 per cent increase in foodgrain production between 1950 and 1954 (from 54 million to 65.4 million tons).

A second explanation is that a vicious circle developed between the often apathetic attitude of the Chinese peasants and the stagnation in agricultural technology. But the resignation to fate and the feeling of despair characteristic of so many Chinese peasants were not inborn traits; they were the reaction to lessons of bitter disappointment learned through many, many generations. How could the villagers of Modern China be expected to harbor a strong desire for and confidence in technical improvement when year after year they were frustrated by a political and social system that robbed them of the fruit of their hard labor? The few improvements which the peasants did make were not given proper recognition by the administration. The idea that the Chinese peasants were not attracted by material betterment or technical change because they preferred the contentment of philosophers cannot be supported by hard facts. Like the policeman in *The Pirates of Penzance*, the Chinese peasant's lot was not a happy one.

An issue which is often taken as the primary factor in approaching any basic problem of China is over-population. It is true that population pressure, which aggravated the under-employment and unemployment situation in rural China, made some technical improvements like mechanization unprofitable. Many technological changes, however, such as the use of better seeds, and labor-intensive projects like conservation, irrigation, afforestation, reclamation, ets., do not involve the displacement of human labor. Even with regard to farm tools, it is unlikely that most Chinese peasants were aware of the population factor and deliberately refrained from adopting better equipment which would increase production and lighten their physical burden. Again, modern Japan offers a classic example of the fact that population growth is not an insurmountable barrier in developing agricultural technology. An effective organized leadership will take steps to develop secondary and tertiary occupations to siphon off the surplus working force in rural areas and will also supply equipment to farmers. Population growth, as the history of many Western countries illustrates, will level off when technical development in both industry and agriculture advances. Furthermore, as the California Institute of Technology's Report on World Food pointed out in May, 1956, in the long run science is capable of feeding a world population many times the present 2.6 billion.

It may be said that "organized leadership" should be the key to analyzing the primary causes of stagnation in Modern China. This applies in particular to agricultural technology and to the rural economy in general. And Chinese themselves, especially the leaders who made policy decisions during the period under discussion, must assume the major responsibility for failing to achieve an agrarian renaissance.

[20] Professor C. F. Remer's estimates. Also see Ragnar Nurkse, *The Problems of Capital Formation in Underdeveloped Countries* (New York, 1953), 75.

National Farm Organizations and United States Tariff Policy in the 1920's

JAMES R. CONNOR

The American farmer in the 1920's found himself in serious economic difficulty. Falling prices for agricultural products, a relative increase in the cost of items he purchased, difficulty in obtaining "easy" credit, transportation expenses, the ever-present debt and interest charges to be met, the continuing problem of overproduction which resulted from the wide-spread mechanization of the American farm, and many other factors added to the complexity of his condition. Political soothsayers, economic analysts, and public figures attempted to improve the farmer's plight. The "farm problem" remained chronic throughout the period of the twenties, however, and in spite of much verbiage and tons of paper the American farmer did not see his situation bettered to any real degree.

The national farm organizations held the forefront of those who advised on the farm problem. Speaking, in theory, for the "man with the hoe," the American Farm Bureau Federation, the National Grange, and the National Farmers Educational and Cooperative Union suggested, pleaded, prophesied, pressured, demonstrated, and argued over various proposals to aid the farmer. In at least one area, that of the relationship of the nation's agriculture to tariff policy, these organizations were relatively united and usually voiced the same position. Viewing the tariffs of the United States largely in the context of their domestic problems, these three major groups worked together closely in representing the farmers' views in this field.

The purpose of this article is to examine the approach of these three organizations to the formulation of American tariff policy in the period of the 1920's. The major emphasis must of necessity rest upon public statements of the organization officials or resolutions of annual conventions. Such sources reveal interesting and important reactions to one of the major considerations in American foreign relations of this period.

The basic assumption here is that an examination of the response of the national leadership of the American Farm Bureau Federation, the National Grange, and the National Farmers Educational and Cooperative Union (hereafter the National Farmers Union) is important in itself in spite of the obvious difficulty for the historian of determining to what extent the national farm organizations represent the views of the nation's agriculture or to what extent the official leadership fulfills the desires of the members in the particular organization. No generalization is drawn from this study to imply that such views as were presented represent those of the American farmer or even of the majority of organization members at that time. One may hazard the opinion, however, that in order to remain in power at the top of relatively democratic and responsive organizations an official must satisfy a large number of the membership in important areas.[1]

The problem of balancing particular forces and interests within a national farm organization presents a real challenge to the leadership because of the possible conflicts between groups within that organization. The approach most often used, at least in the period of the twenties, was for the national leadership to support a resolution with which only a very small group was concerned if such a position did not conflict with the basic interests of any other

[1] C. E. Huff, president of the National Farmers Union, was defeated for re-election in November, 1930, because he had supported the Federal Farm Board. *New York Times*, November 19, 1930, 2:5.

groups.[2] In spite of such obvious difficulties, the national farm organizations in this period were characterized by frankness on the part of their leadership in public statement, in resolution, and in testimony before Congress. The discussions on the tariff which follow are a good case in point. The national farm organizations were acutely aware of farm interests, as they interpreted them, and did not hesitate to champion such interests without pretense.

Perhaps a statement of the Worthy Master of the National Grange at the annual convention of 1924 comes closest to expressing the conclusions presented in this study: "We must recognize, however, that the major steps toward the solution of the farmers' problem must be worked out here in America independent of conditions in foreign lands."[3] To a very great extent this idea represented the thinking of the national farm organizations in the decade after 1922. It involved elements of isolationism, nationalism, and desire for agricultural autarchy. On a more ordinary level of action, such an approach meant that the three national farm organizations were unwilling to accept the requirements for an active role in world affairs as applied specifically to agriculture. This is to assert that like many other groups in American life, these farm leaders desired the benefits of vigorous participation in international politics but refused, at the same time, to place themselves and the nation in a position of equality with other nations of the world. Where a choice between the two positions, international or national, was necessary, as in the case of the tariff, the farm groups usually favored reliance upon domestic and nationalistic responses. Indeed, as the period moved on this thesis becomes more demonstrably clear until by 1932 American agricultural organizations had turned to extreme nationalism not unlike Henry Clay's American System. Repeated emphasis was made throughout the period, particularly beyond 1923, upon the home market, strikingly reminiscent of Clay's proposals.

The oldest of the three national farm organizations was the National Grange (officially the Patrons of Husbandry). Founded in 1867, the Grange grew dramatically in the early part of the 1870's but began to lose ground toward the end of that decade. It reasserted itself in the twentieth century, however, particularly in New England, New York, New Jersey, Pennsylvania, and on the West Coast. Membership statistics vary, but the national office asserted that 800,000 individuals were in granges in the period of the 1920's.[4]

The National Farmers Union, organized in 1902, was the smallest of the three organizations, with strength in the wheat and cotton belts and a claimed membership in the 1920's of 140,000 farm families.[5]

Newest and probably most significant of these groups in the 1920's was the American Farm Bureau Federation, an association which developed out of the county farm agent system during the First World War. Through this period the national organization claimed 1,000,000 farm families as members although other figures are considerably lower. McConnell, who exhibits much animus toward the organization, indicates an average of about 350,000 families,[6] but this is probably too low. Whatever the membership statistics, there seems little doubt that the American Farm Bureau Federation was at least the loudest agricultural voice on the national scene.[7]

Tables 1 and 2 indicate the decline in

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[2] Chester L. Gray before House Committee on Immigration and Naturalization, "Western Hemisphere Immigration," 71 Cong., 2 Sess., *Hearings* (1930), 286.

[3] *Journal of Proceedings*, 58th Annual Session, National Grange (Washington, D.C., 1924), 9. See *New York Times*, December 9, 1930, 2:3 for a similar expression by head of American Farm Bureau Federation.

[4] "Trends in National Farm Organizations," U.S. Department of Agriculture, *Yearbook Separate No. 1769* (Washington, D.C., 1941), 945-954.

[5] *Ibid.*, 954-960, and C. S. Barrett, *Uncle Reuben in Washington* (Washington, D.C., 1923).

[6] Grant McConnell, *Decline of Agrarian Democracy* (Berkeley, Calif., 1953), 185 (Table 1 after Gladys Baker). For Farm Bureau figures in the 1920's see the "Annual Report of the Executive Secretary," (Chicago, Ill., 1920-1932).

[7] "Trends in National Farm Organizations," 960-972, and O. M. Kile, *American Farm Bureau through Three Decades* (Baltimore, Md., 1948).

American agricultural exports during the 1920's, both in terms of dollar value and in terms of absolute amounts of various commodities. As farm leaders discussed the position of the agricultural segment of the economy, they noted that for the first time

Table 1. Agricultural Exports and Imports, 1919-1932 (Gold Dollars)

Fiscal Year	Agricultural Exports	Agricultural Imports	Balance *
1919	$3,861,511,000	$3,410,018,000	$ 451,493,000
1920	2,607,641,000	2,060,237,000	547,404,000
1921	1,915,866,000	1,371,720,000	544,146,000
1922	1,799,168,000	2,077,240,000	−278,072,000
1923	1,867,098,000	1,875,365,000	−8,267,000
1924	2,280,381,000	2,057,163,000	223,218,000
1925	1,891,739,000	2,529,775,000	−638,036,000
1926	1,907,864,000	2,281,421,000	−373,557,000
1927	1,815,451,000	2,193,868,000	−378,417,000
1928	1,847,216,000	2,179,046,000	−331,830,000
1929	1,495,907,000	1,890,508,000	−394,601,000
1930	1,038,034,000	1,163,054,000	−125,020,000
1931	752,145,000	834,238,000	−82,093,000
1932	589,653,000	611,688,000	−22,035,000

* Balance does not include agricultural re-exports. Note: Imports include non-competitive products such as rubber and coffee. Forest products are not included in either exports or imports.
Based upon Table 442, U. S. Department of Agriculture, *Yearbook*, 1935, p. 633.

*Table 2. Foreign Trade in elected Agricultural Commodities, 1919-1932 **

	CORN (Bu.)		WHEAT (Bu.)	
Fiscal Year	Exports	Imports	Exports	Imports
1919	16,729	10,283	222,030	5,511
1920	70,806	5,791	369,313	57,682
1921	179,490	142	282,566	17,375
1922	96,596	182	224,900	20,031
1923	23,135	240	159,880	28,079
1924	9,791	4,618	260,803	6,201
1925	24,783	637	108,035	15,679
1926	19,819	1,098	219,160	13,264
1927	19,409	5,463	206,259	15,734
1928	41,874	490	163,689	21,000
1929	10,281	497	153,245	12,956
1930	3,317	1,747	131,475	19,366
1931	3,969	386	135,797	12,886
1932	8,775	195	41,211	9,382

Calendar	BEEF—BEEF PRODUCTS (lbs.)		PORK—PORK PRODUCTS (lbs.)	
Year	Exports	Imports	Exports	Imports
1919	385,638	38,462	2,637,635	2,779
1920	234,246	50,182	1,536,227	1,541
1921	182,785	32,378	1,679,444	816
1922	173,433	36,694	1,503,929	818
1923	192,368	19,356	1,995,920	1,101
1924	190,259	18,104	1,681,654	5,683
1925	162,640	15,870	1,241,209	7,235
1926	158,612	20,106	1,130,323	9,156
1927	154,043	42,574	1,002,690	14,524
1928	119,779	81,029	1,101,968	12,866
1929	126,442	146,749	1,208,089	8,515
1930	117,985	63,872	949,730	4,655
1931	100,891	29,433	750,822	3,976
1932	89,748	30,373	679,229	5,774

Calendar Year	ALL MEAT AND MEAT PRODUCTS (lbs.) Exports	Imports
1919	3,118,728	107,643
1920	1,851,692	196,425
1921	1,948,962	106,584
1922	1,863,547	125,601
1923	2,342,809	69,960
1924	2,063,522	62,223
1925	1,584,468	62,943
1926	1,445,219	102,626
1927	1,290,979	161,302
1928	1,335,802	194,161
1929	1,448,801	217,795
1930	1,183,014	97,765
1931	978,632	51,672
1932	865,549	51,765

Year†	COTTON (Bales) Exports	Imports	BUTTER (lbs.) Exports	Imports
1919	6,707	732	27,156	20,771
1920	5,973	237	7,829	34,344
1921	6,348	380	7,512	9,551
1922	5,009	492	9,410	15,772
1923	5,815	306	5,425	29,466
1924	8,240	328	8,384	7,189
1925	8,267	340	5,280	6,440
1926	11,299	419	5,048	10,710
1927	7,857	354	3,965	4,955
1928	8,419	479	3,778	3,299
1929	7,635	396	3,582	2,851
1930	7,133	112	2,293	1,329
1931	9,193	138	1,578	1,838
1932	8,895	136	1,386	991

* In Thousands—000 omitted.
† Fiscal year for Butter; year for cotton begins August 1st.
Table based upon compilations from U. S. Department of Agriculture *Yearbooks*, 1922-1933.

in the nation's history, American agriculture showed an unfavorable balance of trade in 1922.[8] The consistent decline of foreign markets was perplexing to the national farm organizations. Only cotton among the principal agricultural commodities maintained a strong position in the export market, but here, too, decline of price per pound seriously affected even cotton farmers. Increasing competition for the world market from new areas of production such as Australia, New Zealand, and Canada, as well as increased yields in areas already under production, some of which had been inactive during the war, made foreign markets less accessible. The increase in trade restrictions on the part of many nations, including the United States, also added to the difficulties encountered in the export of agricultural commodities. The fact that dollar investments of American capital abroad tended to be spent in the industrial segment of the American economy did not aid the prospects of the American farmer.[9] There were, of course, other factors involved. Problems of credit, payment, marketing, transportation, and so on all complicated the export picture.

Any number of reasons were assigned by the national farm organizations for the

[8] See Table 1.

[9] The American Farm Bureau Federation representative raised this point before the House Committee on Ways and Means, "Revenue Revision—1932," 72 Cong., 1 Sess., *Hearings* (1932), 115. See also the *American Farm Bureau Federation Resolutions* (Mimeographed, Madison, Wisconsin), 73.2.

loss of foreign markets by American products. In the early 1920's a joint commission of the House of Representatives and Senate heard many witnesses testify on the question.[10] Smith W. Brookhart, representing the National Farmers Union at this time, spoke specifically on the issue of foreign markets:

> It is now generally said that the cause of the great deflation in prices of farm products is the breakdown of our foreign markets. This, of course, is true, but the causes of this breakdown are shrouded in various mysteries and mysticisms. Foreign credit, foreign exchange, foreign poverty, foreign bolshevism, pacificism, the League of Nations, and the fact we are not in the League are each cited as the true and only cause. I want to brush all these things aside. So far as the American farmer is concerned it is all due to his failure to organize and control his own affairs both politically and economically. A few statistical facts and a little horse sense will demonstrate this conclusion. Outside of Russia there are 200,000,000 underfed people in Europe now, therefore, the demand for farm products exists.[11]

The *non sequitur* in reasoning is not important here; rather Brookhart's conclusion is significant. Questioned more specifically on this point, he insisted that foreign markets could be restored:

> If farmers' own credit were under their control and under collective control, they would have enough so they could act as any other business does; the farmers could in this way make their own arrangement for the export of their products to all parts of the world.[12]

The consensus among organizations at this particular investigation was that the foreign market had been diminishing because the necessary credit, both domestic and foreign, was lacking. Neither the American farmer nor his prospective purchaser had his own credit.

Revival of the War Finance Corporation to assist American farmers by providing credit for exports had been the government's response to such promptings by the farm organizations, but agricultural officials soon discovered that financing of American farm exporters did not redevelop the foreign market. In 1922, attempts made to enable the War Finance Corporation to give credit to the foreign buyer as well as the American exporter were supported by the National Grange and National Farmers Union, but Congress failed to enact this recommendation.[13] Throughout the period, the American Farm Bureau Federation and the National Farmers Union continued to support the creation of a governmental Agricultural Export Corporation for financing of exports,[14] and after the formation of the Reconstruction Finance Corporation in the Hoover administration, the National Grange urged that the new agency perform this necessary function.[15]

In spite of such efforts, the national organizations seemed to assume, reluctantly to be sure, that the American farmer, for the most part, could not compete successfully abroad in most agricultural commodities against cheaper labor, stronger agricultural organizations, high foreign tariffs, and lower costs of production in general.

The loss of the foreign market, or more correctly decline, was at least one of the important factors in bringing about a reevaluation of the home market by the national farm organizations during the 1920's. A representative of the American Farm Bureau Federation expressed his group's concern with the home market in 1929 in the following words, which seem to sum up the philosophy of the period: "Our home market is *always* our best market . . . This market must be held inviolate for the benefit of our own citizens."[16]

The American Farm Bureau Federation felt that there had been a historical change in the position of American agriculture in the foreign market:

> Formerly before the United States developed into a great consumer and creditor nation, competition

[10] Joint Commission of Agricultural Inquiry under Senate Concurrent Resolution 4, 67 Cong., 1 Sess., *Hearings* (3 vols., 1922), and *Report* (3 vols., 1922).

[11] *Ibid.* (Hearings), 13.

[12] *Ibid.*, 29.

[13] *Ibid.*, 43, 103.

[14] *AFBF Resolutions*, 1.1, 71.1.

[15] National Grange, *Journal of Proceedings*, 66th Annual Session (Washington, D. C., 1932), 43.

[16] W. R. Ogg before Senate Committee on Finance, "Tariff Act of 1929," 71 Cong., 1 Sess., *Hearings* (1929), 5:2. Also *AFBF Resolutions*, 73.2.

from [a]broad [sic] was not a factor relative to agriculture and when we were sending much larger amounts of farm crops across the seas than is now the case free trade was not so depressing. . . . It is the realization on the part of agriculture that our exports are coming to be less and less agricultural in nature, and our imports more and more of agricultural commodities that causes farmers to view with the greatest disturbance any letting down of barriers between them and their low-cost producers abroad.[17]

One may argue with the economics of this position, but the attitude is perfectly clear.

Whatever the economic worth of balance of trade statistics, farm organizations used the unfavorable balance in agricultural commodities as additional evidence of the necessity of protecting the domestic market after 1922. When Worthy Master L. J. Taber of the National Grange was challenged on such statistics by Representative Cordell Hull of Tennessee, he quickly admitted that such figures did not present a true picture of agricultural exports and imports inasmuch as such non-competitive foreign products as rubber, coffee, tea, large amounts of sugar, and others were included in the agricultural import statistics. But far from backing down from the position he had taken, Taber re-interpreted his stand to assert that $1,200,000,000 of the 1928 agricultural import total of $2,179,046,000 was directly competitive with the products of American farms and the equivalent of the production of 500,000 farms of 109 acres each. Such inroads into the domestic market by foreign commodities could never be justified in any terms in the eyes of these farmer representatives.[18]

All three organizations consequently united in cooperating on the major tariff legislation of the period: the Emergency Tariff of 1921, the Fordney-McCumber Tariff of 1922, and the Smoot-Hawley Tariff of 1929-1930. As foreign demand dropped off through the period, the home market appeared increasingly important, and farm organizations gave it proportionally more and more emphasis as one way out of their difficulty.[19]

The Secretary of Agriculture also pointed up this concern with the home market in his report of 1930 in words which added emphasis to the views which had been developing since 1922. In 1900, he noted, the United States exported about "24% of the total value of animal products and crops not fed; today (1930) we export well under 15%. There is every reason to expect this trend will continue and that the domestic market will grow in importance to the domestic producer."[20]

An analysis of the arguments for high agricultural tariffs advanced by the national farm organizations is interesting indeed. Briefs before Congressional committees, resolutions of annual conventions, individual statements of the farm leaders, and organizational pressures on Congress reveal the intense seriousness with which the heads of the National Grange, the American Farm Bureau Federation, and National Farmers Union regarded the tariff discussions of the period. Whether they had been "sold a bill of goods" by big business is not the important consideration. The fact is that they were adamant and persuasive on the tariff question. Indeed, one farm official asserted that the reason American business was prosperous in the 1920's was because of the high tariff structure.[21] There was practically no direct attack upon the principle of a high tariff by the national farm organizations. Instead, the basic approach of these groups was an attempt to secure parity in tariff rates with industry. The public records of the national farm organizations which have been examined reveal only two instances in which the question was raised that perhaps *all* tariffs were too high, agricultural as well as in-

[17] Chester L. Gray before House Committee on Ways and Means, "Tariff Adjustment—1929," 70 Cong., 2 Sess., *Hearings* (1929), 3620.

[18] L. J. Tabor before House Committee on Ways and Means, *Ibid.*, 3722, 3726.

[19] For example, this quotation from *AFBF Resolutions* may be utilized: "We must acquire that complete privilege of supply for the home market. . . . We must work until every farm group in the United States has complete protection in the home market." p. 53.6-7.

[20] U. S. Department of Agriculture, *Yearbook, 1931* (Washington, D. C., 1931), 42.

[21] See particularly *New York Times*, December 14, 1927, 14:4.

dustrial, and both these cases involved individual state delegates at national conventions.[22] As a matter of fact, the American Farm Bureau Federation, which accepted the Reciprocal Trade Agreements Program officially in 1934 (largely upon the urgings of its president, Edward A. O'Neal), expressed its misgivings in resolutions of subsequent years.[23] From the public record, strong support of high tariff rates was *the* basic issue of American foreign policy for American agricultural organizations in this period.

Specifically, the tariff position of the three national farm organizations can be summarized in five or six major arguments which were presented. Although each organization and individual used different methods of expression, the ideas advanced are included in the following characterizations. It should be stressed again, in support of the thesis of this article, that the thinking of organizational leaders was developed within the framework of a high tariff structure, the emphasis being upon raising agricultural rates to obtain parity with industry, rather than upon lowering any or all rates.

The argument most often used to support high tariffs upon agricultural goods was the familiar one of protection of the domestic producer against foreign products made cheaper by lower costs of production abroad. In detailed briefs filed before Senate and House committees by the American Farm Bureau Federation, Chester Gray, legislative representative in 1929, specifically worked out costs of production for various agricultural commodities in the United States and in some foreign countries.[24] For example, corn could be produced in the Argentine for $0.937 per bushel while it cost American farmers $1.27 per bushel, according to Gray's statistics. The higher cost of production at home was attributed, of course, to higher costs for what the farmer had to buy to plant, harvest, and market his crop, and, to the farm organizations at least, was the result of the higher American standard of living in both industrial and agricultural segments of the economy. Protection for American agriculture was thus urged on the same basis as protectionism had been developed (in part) some 140 years earlier for manufacturers by Alexander Hamilton. Differences between costs of production at home and abroad were to be equalized by the proposed tariff rates. Gray summed up his case as follows: ". . . We (do not) want to put rates on farm crops which are indefensible, which statistics cannot support and which the competitive conditions of the foreign producer and the American producer compared the one against the other do not justify."[25] The National Grange supported the reasoning of this approach as well in its own briefs.[26]

A second line of argument used by the national farm organizations in their support of high tariffs on agricultural products was the hope that a tariff per se would raise domestic prices of farm commodities. This belief was carried over into areas where foreign competition did not even exist. Perhaps the outstanding case in point was the brief filed by the American Farm Bureau Federation on the Free List of the proposed tariff bill of 1930.[27] Statistics had shown that in terms of foreign competition American short staple cotton (7/8" to 1-3/32") had held its own in the export market. (See Table 2.) But the American Farm Bureau Federation proposed tariff rates from 6¢ per pound on 1-1/16" staple to 24¢ per pound on the longer staples of 1-5/8". It was true that the Salt River (Arizona) producers of the pima and Egyptian cotton could justify a tariff on their product in terms of cost of production here and abroad.[28] But short staple cotton growers could never support a 6¢ per pound or higher rate on a cost of production basis alone. Rather, the idea existed here, as in

[22] National Grange, *Journal of Proceedings*, 64th Annual Session (Washington, D. C., 1930), 75.

[23] *AFBF Resolutions*, 76.1.

[24] Chester L. Gray before House Committee on Ways and Means, "Tariff Adjustment—1929," 70 Cong., 2 Sess., *Hearings* (1929), 3586-3719.

[25] *Ibid.*, 8039.

[26] L. J. Tabor before House Committee on Ways and Means, *Ibid.*, 3719-3726.

[27] Statement of Chester L. Gray, *Ibid.*, 8032-8078.

[28] *Ibid.*, 8050-8053.

other cases of this sort, that through the simple expedient of placing tariff rates on most cotton an induced price increase in domestically-used cotton would result. Of course, such an argument was economically unsound, that is, a tariff in itself would not produce a price increase,[29] but this was one argument advanced for a high agricultural tariff.

The third important basis for the tariff on agricultural products set forth by the National Grange and the American Farm Bureau Federation as well as the Secretary of Agriculture was that high tariffs would enable the American farmer to diversify his own production; they would serve as a sort of incentive to make such desired diversification possible and profitable. W. R. Ogg, assistant legislative representative of the American Farm Bureau Federation, put the argument in these terms: high tariff rates on agricultural products would "promote the transfer of acreage from crops of which we produce a surplus to crops of which we produce less than our own domestic requirements."[30] Such a position was patently distinct from protectionism as such and presented a different emphasis from the second argument outlined above. The crop most often cited in this particular discussion of diversification was the sugar beet. The thought existed that a transition could be made from wheat production in the Plains and Mountain states to the raising of beets.[31] But the diversification principle was also advanced to support high tariffs on many vegetable products such as tomatoes, imported in substantial quantities from Mexico and Central America. Soy bean diversification could be promoted through the tariff, according to the thinking of the National Grange.[32] By providing the attraction of a domestic market free from the fear of foreign competition, national farm organization leaders felt that the large annual surpluses of staple commodities like wheat and corn could be reduced. Such a position would also appeal to politicians advocating a high degree of national self-sufficiency on the part of American agriculture. This very proposal seems to be a reasonable indication that the thinking of farm officials was clearly nationalistic in orientation.

An additional argument for high tariff rates on agricultural products had been developed in 1922 by a representative of the National Farmers Union. Coining the expression "scarecrow principle," J. H. Shroyer testified before the Joint Commission of Agricultural Inquiry that a tariff on products not even imported had a psychological effect on price because of the particular marketing procedures of American agriculture. The Emergency Tariff had helped the farmer, Shroyer asserted, and added that additional and higher tariffs were necessary so that "the next time a shipload of wheat starts from the Argentine the gamblers will not be able to report all over the United States—corn I mean and not wheat—that the price of corn in this country is going to come down on account of that shipload of corn that has started from the Argentine. Isn't that a help?"[33] He insisted that such tariffs did aid agriculture even though he admitted that not as much corn was imported as was grown in one Illinois county. Because of the intricacies of the grain and other commodity exchanges, the "scarecrow principle" seemed to the National Farmers Union, the National Grange, and the American Farm Bureau Federation ample justification for high tariff rates on agricultural products not then entering into the national import picture.

The final point to be considered in the tariff positions of the three national farm organizations was a rather bizarre argument in support of high tariffs—that of "tropical substitutes." As the representatives of more diversified agricultural producers, the National Grange and the American Farm Bureau Federation pushed this harder than the National Farmers Union.

[29] See "Statement Regarding the Tariff Approved by B. H. Hibbard, John R. Commons, and Selig Perlman," Senate Committee on Finance, "Tariff Act of 1929," 16:63-79.

[30] W. R. Ogg, *Ibid.*, 7:1-2. Also *Ibid.*, 16:51.

[31] *Ibid.*, 7:2.

[32] *Ibid.*, 7:146.

[33] Joint Commission of Agricultural Inquiry, Hearings (1922), 86-88.

But in at least one very important area the latter organization utilized the same principle. In terms of a specific product, the position was developed as follows. Chester Gray, appearing before Congressional committees considering the tariff revision in 1929, supported a high rate on imported bananas of 75¢ a bunch. His reasoning was that "the enormous imports of cheap bananas into the United States tend to curtail the domestic consumption of fresh fruits produced in the United States."[34] His stand was that a tariff on bananas would raise the domestic retail price of this commodity and would turn consumers to citrus or other domestically produced fruits. A similar case was made for a tariff on jute, the idea being that if the cost of jute bagging were increased, domestic users of the product would turn to cotton bagging instead.[35]

The "tropical substitute" principle was developed most fully in terms of the production of vegetable oils and animal fats. Since many such oils and fats are interchangeable in use (peanut, corn, cottonseed, coconut, and soybean, for example), one is in competition with another. Consequently, extensive argument for high tariffs on all imported oils had developed by 1929. The problem of correlating the rate on one form of oil with that on another was considered in detail.[36] It was at this point that Southern cotton farmers, hitherto traditional free traders, took up the cudgels, uniting with the Northern agriculturist in the tariff discussions. The Southern Tariff Organization, primarily an organization of Southern banks, filed briefs before Congressional committees in 1921 and 1929 in support of high rates on imported oils, briefs which were supported in turn by the national farm organizations in their own arguments. Many Southern state officials of the National Grange, the National Farmers Union, and the American Farm Bureau Federation supported the contention that high rates on competitive oils used as substitutes for domestic cottonseed and other oils were necessary.[37] So, too, did Northern dairy farmers, though for entirely different reasons. C. S. Barrett, president of the National Farmers Union, was thus able to unite his organization on a high tariff position, a point which Grant McConnell completely misses.[38] Cotton farmers of the South could join with wheat farmers of the North on the tariff issue. The "tropical substitute" argument on the tariff led to many complications for different farm groups within the national organizations, but all three adopted it in principle.[39]

In the final analysis the tariff thinking of the agricultural associations, if accepted by Congress, would have destroyed completely any importation of agricultural products directly or indirectly competitive with those produced by American farmers.[40] Whatever the effect would have been price-wise, the tariff position outlined above was elaborated and refined throughout the twenties. And if high tariff rates on agricultural products did not prevent competition for some reason or other, the national farm organizations were willing to rely upon expedients such as quarantines, im-

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[34] Chester L. Gray before House Committee on Ways and Means, "Tariff Adjustment—1929," 70 Cong., 2 Sess., *Hearings* (1929), 8040. See also *AFBF Resolutions*, 73.3, and National Grange, *Journal of Proceedings*, 63rd Annual Session (Washington, D. C., 1929), 114.

[35] Senate Committee on Finance, "Tariff Act of 1929," 10:11; also 16:33, and *AFBF Resolutions*, 21.1.

[36] House Committee on Ways and Means, "Tariff Adjustment—1929," 560-631.

[37] *Ibid.*, 560-63.

[38] Grant McConnell, *Decline of Agrarian Democracy*, 61. Cf. this statement of the Georgia representative of the National Farmers Union: "We believe in the tariff. We are American people. I am a typical American. I have been for the protective tariff for years and years. Now has come a time when we farmers in Georgia and in the Southern States hope that there will be a revision of the tariff laws and that this revision will last for years and years, and we hope it may be permanent." House Committee on Ways and Means, "Tariff Adjustment—1929," 631.

[39] *Ibid.*, 560-631. The National Grange used a similar argument in support of Prohibition, claiming more milk and dairy products were consumed as a result. *New York Times*, October 1, 1931, 1:4.

[40] This was exactly what the American Farm Bureau Federation desired. *AFBF Resolutions*, 73.3.

port restrictions of various kinds, and, as a last resort, outright embargoes.[41]

A significant aspect of the whole tariff discussion was that little or no attempt was made to attack the principle of a high tariff itself, as already noted above. The National Grange, for example, operating within the framework of the protective industrial structure of nineteenth century America, had adopted the slogan of "a tariff for all or a tariff for none."[42] The latter part was not developed in this period to any significant degree by any of the organizations being considered; rather it was a tariff for *all* with agriculture attempting to obtain parity in tariff rates with industry. Some hint of such an attack upon industrial tariffs was implied in 1928-29 but only if agricultural parity were not achieved. L. J. Taber of the National Grange spoke quite frankly: "We don't want to touch the industrial fabric unless they become avaricious." But, he added, the Grange might be compelled to pull down all tariffs. "You (industry) force us to the border."[43] Similarly the American Farm Bureau Federation threatened to "get rid of all tariffs" if tariff relief for the farmer were not enacted.[44] C. S. Barrett of the National Farmers Union was scathing in his remarks on tariff making, but even he spoke of equality for industry and agriculture.[45]

Both the National Grange and the American Farm Bureau Federation presented briefs showing the disparity of agricultural and industrial rates, an average of 44% for non-agricultural schedules (absolute *ad valorem*) and only 22% for agricultural products. Such an argument was an effective talking point even when the Farm Bureau representative specifically disclaimed it.[46]

The Iowa delegate to the National Grange convention in 1930 who argued that the Grange should adopt the position of a "tariff for none" was probably expressing the view of a small minority of those in the national farm organizations. Edward A. O'Neal, president of the American Farm Bureau Federation after 1930 and himself a free trader, claimed in 1932 that the result of the existing tariff structure was that agriculture was paying the benefits of industrial tariffs.[47]

Whatever approach to tariff consideration is utilized, however, all three national farm organizations presented a united front in arguing for high tariffs, an indication that they were more concerned, as they themselves asserted, with the preservation and development of the home market than with the increase of international trade patterns. Indeed, during the period the American Farm Bureau Federation went on record as maintaining that increased domestic use of agricultural products by American industry would be an important step in relieving the farmers' economic difficulty at the same time its Washington lobbyist was supporting higher tariff rates on agricultural products.[48] The dualism here was more than fortuitous.

The McNary-Haugen and Export Debenture proposals of the twenties fit in with the underlying thesis of this article. The difference between the two plans is indicated in Table 3. Ultimately, of course, the consumer paid the additional costs in both, but the technical operation of each plan was different. Both in essence were designed in one way or another to use foreign nations as a method of disposing (or "dumping") surpluses which were depressing domestic prices. Neither seemed to envisage a profitable agriculture export trade in terms of dollar return. The fundamental conception

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[41] House Committee on Ways and Means, "A Bill to Prohibit the Importation of any Article or Merchandise from the U.S.S.R.," 71 Cong., 3 Sess., *Hearings* (1931), 79-80; "Embargo on Certain Agricultural Products," 71 Cong., 3 Sess., *Hearings* (1931), 58-59; "Prohibition of Importation of Goods Produced by Convict, Forced, or Indentured Labor," 71 Cong., 3 Sess., *Hearings* (1931), 5.

[42] National Grange, *Journal of Proceedings*, 54th Annual Session (Washington, D. C., 1920), 138.

[43] *New York Times*, January 29, 1929, 7:2, and House Committee on Ways and Means, "Tariff Adjustment—1929," 53.

[44] *New York Times*, June 12, 1928, 3:6.

[45] C. S. Barrett, *Uncle Reuben in Washington*, 139-145.

[46] Senate Committee on Finance, "Tariff Act of 1929," 7:23-38.

[47] *New York Times*, December 6, 1932, 8:1.

[48] *AFBF Resolutions*, 71.6 and 71.7.

Table 3. Comparison of Projected Operation of McNary-Haugen and Debenture Plans for Wheat (as example)

McNARY-HAUGEN PLAN: Supported by American Farm Bureau Federation and National Farmers Union.	
Assume TOTAL PRODUCTION OF 1,000,000,000 Bushels of Wheat @ $1.40 per bu.	$1,400,000,000
Assume FARM BOARD "DUMPS" 200,000,000 Bushels @ $1.00 per bu.:	
LOSS OF 40¢ per bushel for 200,000,000 bushels	80,000,000
LOSS DIVIDED OVER TOTAL PRODUCTION OF 1,000,000,000 Bushels to Obtain Equalization Fee of 8¢ per bushel:	
AVERAGE PRICE PER BUSHEL: $1.32.	
EXPORT DEBENTURE PLAN: Supported by National Grange.	
Assume TOTAL PRODUCTION OF 1,000,000,000 Bushels of Wheat.	
Assume DOMESTIC CONSUMPTION OF 800,000,000 Bushels @ $1.40 per bu.	1,120,000,000
Assume FOREIGN EXPORTS OF 200,000,000 Bushels @ $1.00 per bu.	200,000,000
DEBENTURES OF 20¢ (One-half Tariff Rate) per bushel issued for export portion of crop	40,000,000
TOTAL REALIZED FOR ENTIRE CROP	$1,360,000,000
AVERAGE PRICE PER BUSHEL: $1.36.	

Computations assume stable price, estimated at world price plus tariff.

of both seemed to be that the domestic or home market was the only one in which the American farmer could obtain a high enough return to maintain the "American standard of living." Similarly, they seemed to be based upon a conclusion that American agriculture could not compete successfully (profitably) abroad. Cotton, it should be noted, was to be included in the Export Debenture plan by a provision for a flat 2¢ per pound debenture, since there was no tariff on the short staple product, and it was one of the five or six basic commodities to be included in McNary-Haugenism. The National Grange, which supported the Export Debenture scheme, included many other commodities. The argument for the adoption of either proposal was that since a large portion of such crops did not benefit from tariff protection because it was sold in the world market, it was logical to work out some system whereby such benefit could be obtained. Coolidge's two vetoes and Hoover's threat of a veto were either plan passed forced the national farm organizations to attempt some other approach for solving the problem of surpluses. But both proposals indicated quite clearly their position on the basic value of the foreign market in the period.

The tariff picture thus drawn is, in general, one which fits into a highly nationalistic frame. There is some evidence that the national farm organizations were concerned with the break-down of other kinds of barriers between nations. Support of the World Court, with reservations, was recorded by the National Grange and the American Farm Bureau Federation.[49] Outlawry of war and support of disarmament were also warmly endorsed.[50] Peace was advocated in moving terms.[51] Strong support was also exhibited throughout the period for a well-developed and efficient merchant marine (owned and operated by the American government, if necessary), and continued attempts were made to encourage the enactment of the Great Lakes-St. Lawrence Seaway, these latter two points, of course,

[49] National Grange, *Journal of Proceedings*, 64th Annual Session (Washington, D.C., 1930), 166. *AFBF Resolutions*, 38.3.

[50] National Grange, *Journal of Proceedings*, 55th Annual Session (Washington, D.C., 1921), 19. *AFBF Resolutions*, 38.1.

[51] For example, see National Grange, *Journal of Proceedings*, 58th Annual Session (Washington, D.C., 1924), 33, 220. At the same convention, the Grange adopted a resolution in support of a popular referendum on war except in case of invasion, p. 243.

giving farmers economic advantage in the transportation of agricultural produce.[52]

On the tariff issue, however, the national organizations were adamantly in favor of a system which, they argued, would secure protection for American agriculture from the competition of foreign imports and thus serve to mitigate the ills of the farm economy. There is every indication that the rank and file membership of these organizations, by failing to challenge the asserted position of their leaders, accepted that interpretation of the tariff situation. A profitable agriculture depended, in the last analysis, upon a guarantee of the home market, increased use of agricultural products by American industry, and a generally nationalistic approach far different from that advocated by the majority of the nation's economists. The relative position of American agriculture seemed to be declining not only in the American economy but the world economy as well. Farm leaders, reflecting their genuine concern as well as their disillusionment over the situation in the agricultural segment of the economy, grabbed the protective tariff as offering one means of alleviating the problem, politically and economically nationalistic though it was.

In 1922 ex-Premier Clemenceau of France warned the American Farm Bureau Federation that the "farmers' prosperity depends upon his interest in foreign affairs and his participation in European markets," and although he (Clemenceau) had been told that the "farmers represented a group that is most opposed to American interference in foreign affairs," he expressed confidence that the American Farm Bureau Federation would heed his advice.[53]

In 1923, as if in rsponse to Clemenceau's "plea," the American Farm Bureau Federation sent a delegation to Europe to study European practices and to discover if American agricultural produce could regain its profitable position there. The delegation returned to the United States, submitting a resolution to the annual convention "urging the United States to resume an active role in international affairs as the most feasible means of restoring Europe as a market for American products."[54] Whatever the position of the United States in international affairs may have been during the period, the national farm organizations' approach did not correspond to the sense of the American Farm Bureau Federation's resolution. It was indeed, as the *New York Times* reporter covering the delegation's tour feared, a long way between Europe and Chicago.

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[52] *Ibid.*, 18; National Grange, *Journal of Proceedings*, 60th Annual Session (Washington, D. C., 1926), 141; *AFBF Resolutions*, 54.1-54.2; and Senate Committee on Foreign Relations, "St. Lawrence Seaway," 72 Cong., 2 Sess., *Hearings* (1932), 901-2.

[53] *New York Times*, December 12, 1922, 1:6.

[54] *Ibid.*, November 26, 1923, 4:2. The final form of the resolution was worded in this manner: "We urge the immediate adoption by the American government of a vigorous foreign policy designed to carry out America's obligations resulting from her war aims and the terms of the armistice which ended the war, and thus we will restore peace and prosperity to Europe." *AFBF Resolutions*, 38.1.

WHY RED CALVES WERE CHEAPER THAN BLACK ONES IN COLONIAL DAYS

For many months after their arrival, the early settlers of New England had no beasts of burden; when at last a few cows were brought over from the mother country, they were poorly fed on coarse meadow hay, and often died from exposure and want of suitable food, or fell a prey to the wolves and the Indians. A red calf soon came to be cheaper than a black one, on account of the greater probability of its being mistaken for a deer and killed by the wolves.—First Annual Report of the Secretary of the Massachusetts Board of Agriculture, Boston, 1854.

The Rise of the Farmers' Mutual Benefit Association in Illinois, 1883-1891

ROY VERNON SCOTT

Among the farm organizations which preceded the Populist party, the National Farmers' Alliance, founded by Milton George in 1880, and the National Farmers' Alliance and Industrial Union, commonly known as the Southern Alliance, were the most important. Other independent orders, however, including the Patrons of Husbandry, the Patrons of Industry, and the Farmers' Mutual Benefit Association, existed and contributed to the general picture of agrarian discontent during the years following 1880.[1] Although only a shadow of the great movement which swept the Middle West in the 1870's, the Grange established almost 1,900 new locals during the 10 years after 1885, while the Patrons of Industry, formed in Michigan in the fall of 1887, claimed 200,000 members four years later.[2]

Meanwhile, the Farmers' Mutual Benefit Association, which came to be the strongest order in Illinois and had significant strength in neighboring states as well, arose in response to a demand by southern Illinois farmers for a means of achieving agrarian unity and cooperation. In the early 1880's, with the Grange in decline, the National Farmers' Alliance limited to northern Illinois where the *Western Rural* exerted great influence, and southern leaders engaged in uniting cotton raisers, the farmers of southern Illinois found it necessary to form a new organization. Drawing on Granger precedents and headed by men who had participated in the earlier movement, the Farmers' Mutual Benefit Association originated in an area characterized by relatively poor soils, smaller farms, and little crop diversification. But with the development of discontent which came later in the decade, the organization invaded the east-central counties where cereal-producing farmers suffered from falling prices for corn and wheat, and ventured into the states bordering Illinois on the east, south, and west.[3]

In contrast to the Grange and the National Farmers' Alliance, the Farmers' Mutual Benefit Association was not the creation of one man. In fact, its formation resulted more from accident than from design, although aggressive leadership and conditions conducive to agrarian organization account for its growth. In the early fall of 1883, five members appeared at Vienna, a small town in Johnson County, Illinois, with loads of wheat for sale. When the local buyer informed them that, due to an unsteadiness of the market, he could not quote a price and therefore could not purchase their wheat, they suspected him of trickery. Resolving to settle their difficulties, the farmers telegraphed the St. Louis market, received a favorable reply, and, by taking advantage of a railroad car on the tracks, shipped their grain directly to the city. Upon receiving payment, the

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[1] W[illiam] A. Peffer, "The Farmers' Alliance," *Cosmopolitan*, 10:694-696 (April, 1891); H. R. Chamberlain, "Farmers' Alliance and Other Political Parties," *Chautauquan*, 13:338-339 (June, 1891); Solon J. Buck, *The Granger Movement* (Cambridge, 1913), 303-305; John D. Hicks, *The Populist Revolt* (Minneapolis, 1931), 96-113.

[2] Thomas Clark Atkeson, *Semi-Centennial History of the Patrons of Husbandry* (New York, 1916), 133-192; Louis Aubrey Wood, *A History of Farmers' Movements in Canada* (Toronto, 1924), 110-111; Sidney Glazer, "Patrons of Industry in Michigan," *Mississippi Valley Historical Review*, XXIV, 24:186-187 (September, 1937).

[3] For a study of economic conditions in Illinois, see Chester McArthur Destler, "Agricultural Readjustment and Agrarian Unrest in Illinois," *Agricultural History*, 21:104-116 (April, 1947).

farmers found that not only had they sold their crop profitably but also they had deprived a middleman of his usual fee. The transaction was so pleasing that they continued the procedure throughout the wheat-marketing season.[4]

As the first shipment created considerable discussion and favorable comment, other farmers began banding together to enjoy similar advantages. Since the shipping of grain required sufficiently large amounts to warrant the use of an entire car and because the farmers believed that secrecy was necessary, some type of organization was needed. Therefore, five clubs, meeting in rural school houses, appeared in Johnson County during the fall and early winter of 1883. Later the desirability of a central association led to a meeting at New Burnside where the farmers adopted a crude constitution and a set of by-laws, formulated a ritual, labeled the convention a general assembly, and chose the name, Farmers' Mutual Benefit Association, for the order.[5]

By the terms of the constitution, each local lodge was represented in the central body in proportion to strength. A president, vice-president, and secretary-treasurer presided over the general assembly which convened every three months to conduct necessary business. The constitution also provided a simple means of expansion by allowing each local to organize others, upon the petition of at least ten farmers. The newly-established groups remained branches of the organizing lodge until their representatives were seated in the next general assembly, but the branch lodges could organize others as soon as they themselves were formed.[6] By this procedure, groups of farmers wishing to organize sent a written request to a neighboring lodge which named a committee to investigate the qualifications of the applicants. If they were found satisfactory, the neighboring lodge assisted in the establishment of the new group, the election of officers, and the adoption of by-laws. Following the formation of the new club, the secretary of the organizing lodge made a report to the secretary of the general assembly, who issued a charter to the new local.[7]

The subordinate groups, which constituted the basic units of the order, were similar to the typical debating or literary clubs which flourished throughout the Middle West and, in some respects, were modeled after the Odd Fellows fraternal association.[8] During the early years, the members developed a badge and a ritual which continued in use throughout the life of the movement. The badge consisted of a blue ribbon supporting a white maltese cross with the initials of the order on one side and a beehive on the other. Similarly, the initiation procedures developed early. While they were reported to be "beautiful and impressive," they were known locally as "riding the mule" and they consisted in part of requiring the initiate to walk blindfolded and barefooted down an aisle, usually in a rural school house, in which boards with exposed nails were placed. These were quietly removed as the initiate approached and replaced after he passed.[9]

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[4] The most authorative account of this action is given in John P[atterson] Stelle, *Uncle John's F.M.B.A. Song Book* (8th ed., Mt. Vernon, Illinois, 1891), 1-2; F[red] G. Blood, *Handbook and History of the National Farmers' Alliance and Industrial Union* (Washington, 1893), 59.

[5] Stelle, *Song Book*, 2-3; J. E. Bryan, *The Farmers' Alliance, Its Origin, Progress, and Purposes* (Fayetteville, Arkansas, 1891), 68. The title chosen was, perhaps, unfortunate. Since the order came to be known by its initials, it was easy for opponents to ridicule it. One opposition paper claimed that the letters, F.M.B.A., stood for "Farmers' Mutual Blindfold Association" and a contemporary stated that they meant "fill my bottle again." *Albion* [Illinois] *Journal* May 8, 1890; Harvey E. Dorsey to author, November 10, 1955.

[6] Blood, *Handbook and History of the National Farmers' Alliance*; N. B. Ashby, *The Riddle of the Sphinx* (Chicago, 1892), 467; Stelle, *Song Book*, 3.

[7] *The Industrial Struggle, a History of the Farmers' Alliance and Its Work* (Chicago, 1892), 42-43; E. A. Allen, *Labor and Capital* (Cincinnati, 1891), 415. The only existing F.M.B.A. charter is in the Edwards County Historical Society collection, Albion, Illinois.

[8] Stelle, *Song Book*, 2-3; Bryan, *The Farmers' Alliance*, 68.

[9] *Chicago Tribune*, January 6, 1890; *National Economist*, 2:134 (November 16, 1889); interview with John H. Nowlan, Greenville, Illinois, August 24, 1956.

During the first three years, the organization spread by "accretion" into Williamson, Franklin, and Saline counties and by late 1886, it reached Jefferson and Hamilton, with a total membership of about 2,000.[10] Although the work was slow and crude, the method of expansion gave the organization certain distinct advantages over contemporary groups. Milton George and the National Farmers' Alliance, for example, recognized alliances whenever farmers asked for a charter. Such a technique produced rapid expansion but locals were widely scattered, isolated from each other, and lacked united strength. On the other hand, the method used by the Farmers' Mutual Benefit Association resulted in a slow advance but created a moving line of organization with greater cohesiveness and strength. The Illinois group also avoided the pitfalls inherent in the use of paid lecturers whose extravagant promises often led to a disappointed membership and resultant failure.[11]

At a general assembly which convened in Benton during the first week in April, 1887, spokesmen pointed out that the movement was without "form or void" and that, legally, it had no existence. Better organibation and more aggressive work was clearly needed. In an attempt to make expansion more rapid, the assembly appointed Fred G. Blood of Jefferson County as organizer but the association did not seriously consider reorganization and incorporation until the next regular meeting of the general assembly, held July 4, 1887, in Mt. Vernon.[12] There, the central body appointed a committee to secure legal status, selected another group to revise the constitution, and named several additional organizers to work in more remote areas.[13]

Three months later, at Du Quoin, October 6, 1887, a group of 500 farmers accepted a new constitution authorized by a state charter granted September 1, 1887. It empowered the association to organize locals throughout the United States and outlined the pattern which the order followed the remainder of its life.[14] The new constitution created a centralized organization with assemblies on three levels. The basic unit remained the subordinate lodge meeting at least twice a month and including a minimum of 10 persons having the following qualifications: a male citizen of the United States, at least 21 years of age and possessing good moral habits and character, the maintenance of a residence in the area of the lodge for not less than 60 days, and employed principally as a farmer. The subordinate lodge elected its four officers for six-month terms at the first regular meetings in April and October. Locals were given the power to make their own by-laws and other necessary regulations and to expel members by majority vote.[15]

The subordinate lodges lost their representation in the general assembly, but they sent delegates to county assemblies which were established in counties having at least three locals. The intermediate bodies, which met quarterly during the months of January, April, July, and October, exercised general supervision over locals, settled minor disputes which arose, and served as centers for wider cooperative enterprises.[16] Each county group, in turn, was represented in the general assembly which met annually on the third Thursday in November. It had complete control of the order, enacted all laws, furnished charters to both county and local groups, and settled all questions which arose. Its officers were the president, vice-president, secretary, and

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[10] Blood, *Handbook and History of the National Farmers' Alliance*, 59.

[11] Stelle, *Song Book*, 3.

[12] *Ibid.*; *St. Louis Globe-Democrat*, July 5, 1887.

[13] Stelle, *Song Book*, 4. The new organizers introduced the order into Missouri in the summer of 1887, marking the first extension of the movement beyond the boundaries of Illinois.

[14] Ashby, *The Riddle of the Sphinx*, 468; *Du Quoin* [Illinois] *Tribune*, October 31, 1887; Farmers' Mutual Benefit Association, *General Charter, Declaration of Purpose, and Constitution and By-laws* (Mt. Vernon, Illinois, 1890), 2.

[15] *Ibid.*, 11, 19-23; *The Industrial Struggle*, 42; Allen, *Labor and Capital*, 415-416. In practice, locals interpreted the occupation requirements liberally and other "wealth producers" were admitted. See *National Economist*, 2:134 (November 16, 1889).

[16] Farmers' Mutual Benefit Association, *General Charter*, 10-11, 15-16, 18; Ashby, *The Riddle of the Sphinx*, 472-473, 477.

treasurer, who were elected for one year terms at the annual meeting. A special committee of five, known as the board of trustees, was also selected annually and served as the legal head of the association between sessions.[17]

For the support of the organization, the constitution authorized the association to collect a $1 charter fee from both county assemblies and local groups and to assess members a quarterly per capita fee of one cent. Other expenses of the individual member included a 50 cent initiation fee and quarterly dues of 25 cents, which supported the subordinate groups. County assemblies charged small annual or quarterly fees, varying in size, for their maintenance. Regular officers served without salaries but the central association paid the expenses of delegates to general assembly meetings.[18]

Following reorganization, the movement entered a period of rapid and sustained growth. At the Du Quoin meeting, October 6, 1887, the organization had 389 subordinate lodges with an estimated membership of 15,000 and in November, 1888, 942 locals and 31 county assemblies. Meanwhile, the organization spread into Indiana, Missouri, Kansas, and Kentucky, although 80 per cent of the locals were found in Illinois.[19]

The order, however, did not escape the inevitable controversies among its leaders. Early in the history of the movement, A. M. Palmer, one of the first trustees, began publishing in Marion a paper known as the *Binder* which became the official journal of the organization. Later, Fred G. Blood succeeded Palmer as editor and manager but the paper did not prosper, although prominent leaders gave it their support.[20] Moreover, Blood bitterly opposed the reorganization of the association and used the *Binder* to voice his objections. The split among the leaders led to a special meeting in Fairfield, December 27, 1887, where over 600 delegates rejected the criticisms offered by Blood and gave their support to the reorganization completed three months earlier. As an indication of their feeling, they elected John P. Stelle of Hamilton County as secretary while Blood lost his position as general organizer.[21]

The shift in leadership brought to the forefront the leader who more than any other exemplified the association. It is unknown when John P. Stelle joined the movement, but he served as one of the first trustees and, following his election as secretary, he became the voice of the order. In the spring of 1888, when the Jefferson County assembly decided that the group needed an energetic journal, they asked Stelle to revive the *Binder*. A trip to Marion convinced him that the usefulness of the magazine had been destroyed by controversies and mismanagement, so the group decided to establish another paper. In partnership with two Mt. Vernon businessmen, Stelle established the *Progressive Farmer*. The first issue appeared April 21, 1888, and five months later, it absorbed the *Binder*. By 1890, the *Progressive Farmer* claimed a circulation of 6,913. A year later, over 16,000 farmers were subscribers and it was the most widely-read paper in southern Illinois, except for the metropolitan dailies from St. Louis and Chicago.[22] The initial success of the *Progressive Farmer* was so great that in November, 1888, the general assembly adopted it as the sole journal of the order and established an F.M.B.A. printing company in Mt.

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[17] Allen, *Labor and Capital*, 416; Farmers' Mutual Benefit Association, *General Charter*, 9-11, 14-16, 25; *National Economist*, 2:134 (November 16, 1889).

[18] Stelle, *Song Book*, 6; Farmers' Mutual Benefit Association, *General Charter*, 23-24; [Springfield] *Illinois State Register*, November 19, 21, 1891.

[19] *Song Book*, 6; Bryan, *Farmers' Alliance*, 69; *Albion Journal*, September 27, 1888; *St. Louis Globe-Democrat*, November 21, 1888.

[20] *Du Quoin Tribune*, October 6, 1887; Stelle, *Song Book*, 3-4.

[21] *St. Louis Globe-Democrat*, December 27, 1887; Stelle, *Song Book*, 5; Bryan, *The Farmers' Alliance*, 69; *Wayne County* [Illinois] *Press*, December 29, 1887; January 5, 1888.

[22] Stelle, *Song Book*, 5-6; *Portrait and Biographical Record of Clinton, Washington, Marion, and Jefferson Counties* (Chicago, 1894), 310-311, 482; *American Newspaper Annual*, 1890 (Philadelphia, 1890), 150; Eliza Coker Stelle, Diary, January 1, 1889, January 1, 1890, January 1, 1891, MSS, in the possession of Clarence A. Stelle, East St. Louis, Illinois; John R. Stelle to author, December 15, 1955.

Vernon, with Stelle as manager, which published songbooks, rituals, proceedings of meetings, and other necessities.[23]

John P. Stelle was well qualified for his task. The son of a pioneer father who migrated from New Jersey in 1817, he was born in Calhoun County, Illinois, April 16, 1843. Three years later, the family moved to Hamilton County where he grew to manhood. When he was three years old, Stelle suffered from an attack of infantile paralysis which made him a cripple for the remainder of his life. His illness and the backwardness of Hamilton County so restricted his formal education that it was not until he was 13 that he attended school but, having been taught to read and write at home, his progress was rapid. As early as 1860, he worked for the publisher of the *Hamilton Sucker*, a weekly printed in McLeansboro, learned the printing trade, and contributed articles for publication. In September, 1860, Hamilton County authorities licensed him to teach in the common schools and a month later, he began a teaching career. By 1864, he was fully qualified to teach in all local schools.[24]

Meanwhile, the coming of the Civil War allowed him to widen his experiences. Although southern Illinois included many whose allegiance to the Union was questionable, Stelle was intensely patriotic. His physical handicap excluded any possibility of active service, but he helped an elder brother raise a company. Following an unsuccessful political campaign as a Republican candidate for local office, Stelle published a strong pro-Union paper, the *Union Eagle*, but it collapsed with the end of the war. After 1865, he returned to the teaching profession and, from 1873 to 1877, he served as Hamilton County superintendent of schools.[25]

In the meantime, Stelle acquired a 120-acre farm located near Dahlgren and devoted part time to agriculture. Soil fertility and scientific farming interested him and he developed one of the earliest commercial orchards in southern Illinois.[26] When the postwar depression in agriculture appeared, he became active in the Granger movement, changed from a Republican to an independent, and turned again to journalism as a means of expression. From 1872 to 1878, he published the *Golden Era*, a greenback organ, and later he edited reform papers in Evansville, Indiana, and Murphysboro, Illinois. When Greenbackism faded from the scene, he returned to farming and teaching and as late as January, 1888, he served as a rural school teacher in Jefferson County. Although unsuccessful in a material way, the experience gained from a varied career made him a persuasive writer, a powerful speaker, and contributed to his rise to prominence in the order.[27]

The development of effective leadership aided by a popular and successful journal coincided with growing economic distress in southern Illinois. During the five years between 1887 and 1891, falling prices for cattle, hogs, corn, and wheat combined with widespread crop failures to reduce drastically farm income. In southern Illinois, where the effect of claypan soils was clearly apparent, there was not a good crop during the 10 years before 1895. Furthermore, the Illinois farmer who devoted attention to hogs, corn, or wheat suffered from violent plagues of hog cholera, chinch bugs, and grasshoppers. Since cholera attacked large

[23] *St. Louis Globe-Democrat*, November 19, 1888; *The* [Murphysboro, Illinois] *Independent*, November 23, 30, 1888; Blood, *Handbook and History of the National Farmers' Alliance*, 59.

[24] John P[atterson] Stelle, A Record of the Travels, Adventures, and Incidents in the Life of John P. Stelle of Hamilton County, Illinois, MSS, in the possession of Clarence A. Stelle, East St. Louis, Illinois; Elsie Stelle Winkler to author, September 27, 1955; School Commissioners of Hamilton County, Illinois, 1861-1899, MSS, in office of Hamilton County superintendent of schools, McLeansboro, Illinois.

[25] *Clinton, Washington, Marion, and Jefferson Counties*, 218-219; Clarence A. Stelle to author, December 15, 1955; School Commissioners of Hamilton County, 1861-1899, MSS.

[26] Clarence A. Stelle to author, December 15, 1955.

[27] *Clinton, Washington, Marion, and Washington Counties*, 218-229; Franklin William Scott, *Newspapers and Periodicals of Illinois, 1814-1879* (Chicago, 1910), 230; Clarence A. Stelle to author, December 15, 1955; Eliza Coker Stelle, Diary, January 1, 1888, MSS; *National Economist*, 6:179 (December 5, 1891).

hogs as well as pigs, farmers occasionally saw their corn crop die on their hands as whole herds were wiped out. Also, the damage from chinch bugs and grasshoppers increased in the late 1880's, especially in southern Illinois where frequent droughts and an abundance of corn and wheat stimulated their development. In 1887, a farmer from Centralia summarized the condition of many when he said, "Every thing is burning up . . . No corn, no potatoes . . . very few apples, and plenty of chinch bugs is our crop."[28]

Declining economic conditions were soon reflected in a rapid increase in size and importance of the F.M.B.A. In November, 1889, Stelle reported a total of 2,181 lodges and 76 county groups, but a year later there were 4,947 lodges and 154 county groups, or over a 500 per cent increase in the number of locals in two years. Membership was more difficult to determine and the figures appearing in local newspapers and in articles written by prominent leaders occasionally far outdistanced facts. For example, in January, 1890, Stelle claimed an enrollment of over 100,000 and by June, 1890, a total of 200,000, but five months later, he was able to show only 107,785 in his official records.[29] The success of the order, however, was unquestioned. By November, 1889, locals existed in Indiana, Kansas, Kentucky, Nebraska, Missouri, Iowa, Ohio, and West Virginia as well as Illinois, although the latter state and Indiana contained 88 per cent of the total enrollment. In 1890, the rate of growth was greater in Indiana than in any other state and by the end of the year, it had over 8,000 more members than the 43,175 recorded in Illinois. The election of William J. Stillwell of Fort Branch, Indiana, as president of the general assembly indicated the growing importance of the state in the order.[30]

The rapid growth of the association necessitated further changes in the constitution. Over 750 delegates from county assemblies appeared at Mt. Vernon, Indiana, in November, 1889, and, to prevent the general assembly from becoming unmanageably large, altered the constitution to allow for the formation of state assemblies. The amendment specified that such bodies might be established in states having at least three county groups. They were presided over by four officers elected for one-year terms at annual meetings held the third Thursday in October. County groups were represented in the state bodies which, in turn, sent delegates to the meetings of the general assembly.[31]

State assemblies appeared in Kansas, Indiana, and Illinois shortly after they were authorized and, within a year, they existed in Kentucky, Missouri, and Iowa.[32] The Illinois state body was formed at a meeting in Centralia, February 4, 1890, after a preliminary convention in Mt. Vernon had been unproductive of results. Although only 20 of the existing county assemblies were represented, the delegates established a permanent organization and elected Cicero J. Lindley, a prominent Bond County farmer and judge, as president.[33] The first regular meeting of the Illinois group convened in Springfield, October 21, 1890. In reporting to the 233 delegates from 56 counties, Lindley claimed that the

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[28] George Hillis Newlove, "Economic History of Illinois Agriculture" (Unpublished thesis, University of Illinois), 108-109; "Illinois Agricultural Statistics," Illinois Department of Agriculture, Illinois Cooperative Crop Reporting Service, *Circular* 445 (Springfield, June, 1949), 15, 19, 24-25; *Albion Journal*, May 1, 1890; *Western Rural*, November 28, 1885, March 27, 1886, August 22, 1885, October 3, 1885; *Prairie Farmer*, 54:518 (August 13, 1887).

[29] *Progressive Farmer*, January 2, 1890; Stelle, *Song Book*, 6; Farmers' Mutual Benefit Association, *Proceedings of the General Assembly held at Springfield, Illinois, November 18-21, 1890* (Mt. Vernon, Illinois, 1890), 3-4.

[30] *Ibid.*, 4; *Western Rural*, February 14, 1891.

[31] *Ibid.*, February 8, 1890; *Mt. Vernon* [Illinois] *Register*, November 27, 1889; Farmers' Mutual Benefit Association, *General Charter*, 10, 15-17.

[32] *Progressive Farmer*, January 2, 1890; *Edwardsville* [Illinois] *Intelligencer*, February 12, 1890; Farmers' Mutual Benefit Association, *Proceedings, 1890*, 3.

[33] *Progressive Farmer*, January 2, 1890; *National Economist*, 2:312 (February 1, 1890); *Centralia* [Illinois] *Daily Sentinel*, February 3, 1890; *Edwardsville Intelligencer*, February 12, 1890; *Chicago Tribune*, April 28, 1890; *Albion Journal*, September 11, 1890.

state contained 1,650 local lodges and had registered a 100 per cent gain in membership in less than a year. A month later, John P. Stelle reported 43,175 members in Illinois but claimed that 5,044 more could be counted who were not included in the official totals because they had failed to pay their quarterly dues.[34]

At the same time that the order grew in membership, it expanded in geographical area. At the end of 1886, the major part of the organization's strength was limited to six counties: Johnson, Williamson, Franklin, Jefferson, Hamilton, and Saline. Beginning in 1887, the organization began a rapid expansion northward, occupying the remainder of southern Illinois, and moved into the central counties which had been partially organized by the National Farmers' Alliance. The absorption in 1887 of independent farmers' clubs in Marion, Clinton, and Washington counties signified the growing power of the organization; in 1888, the remainder of the lower counties and those lying along the Wabash as far north as White and Edwards were fully occupied. In 1889, the order completed the organization of the counties along the Wabash and began the invasion of central Illinois by moving into Clark, Cumberland, and Shelby counties.[35] A year later, the F.M.B.A. entered the counties near the mouth of the Illinois River, including Madison, Macoupin, and Jersey. By the early part of July, 1890, there were 37 lodges in Madison County with a membership of 970. The organization appeared in Jersey County in April, 1890, and a county body was established two months later which had 500 members by October, 1890.[36]

The greatest gains, however, were registered in central Illinois where the F.M.B.A. competed successfully with the National Farmers' Alliance. At the meeting of the general assembly in November, 1890, Stelle reported the formation of county assemblies in Edgar, Sangamon, Coles, Douglas, Logan, Piatt, Vermilion, Tazewell, McLean, and Menard counties, all in central Illinois. Some of the more recently organized counties reported enormous memberships. Christian County claimed 2,000 members as early as January, 1890, and Sangamon had 1,484 enrolled farmers four months later. Shelby County had 2,500 members in January, 1890, Moultrie 1,400 by September, while Macon County had 40 locals in May, 1890.[37] In the northern third of Illinois, where the revived Grange and the National Farmers' Alliance flourished, the F.M.B.A. had little strength. Stelle reported county assemblies in Rock Island, DuPage, and Winnebago counties, but locals were widely scattered and were of little importance to the organization.[38]

In the western counties, especially those situated between the Illinois and Mississippi rivers, the presence of locals of the National Farmers' Alliance and Industrial Union prevented successful F.M.B.A. work. The entrance of the Southern Alliance into Illinois, a part of the aggressive expansion of the group after the failure of consolidation at the great St. Louis meeting in December, 1889, was aided by dissatisfied F.M.B.A. members.[39] As early as 1888, Charles W. Macune invited the F.M.B.A.

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[34] *Illinois State Register*, October 21, 1890; *Jacksonville* [Illinois] *State Journal*, October 23, 1890; Farmers' Mutual Benefit Association, *Proceedings, 1890*, 4.

[35] Blood, *Handbook and History of the National Farmers' Alliance*, 59; *Centralia Daily Sentinel*, January 27, 1887; *Albion Journal*, July 26, 1888, July 19, 1888, December 21, 1889.

[36] *Alton* [Illinois] *Sentinel-Democrat*, March 6, 1890, July 24, 1890), April 24, 1890, June 5, 1890, October 23, 1890.

[37] Farmers' Mutual Benefit Association, *Proceedings, 1890*, 3; *Progressive Farmer*, January 2, 1890; *Western Rural*, November 30, 1889; *St. Louis Globe-Democrat*, April 9, 1890; *Chicago Tribune*, June 6, 1890; *Prairie Farmer*, 57:616 (September 27, 1890); *Clinton* [Illinois] *Register*, May 16, 1890.

[38] Farmers' Mutual Benefit Association, *Proceedings, 1890*, 3.

[39] *St. Louis Globe-Democrat*, December 7, 8, 1889; N[elson] A. Dunning, ed., *Farmers' Alliance History and Agricultural Digest*, Washington, 1891), 124, 130-131, 134, 241; *National Economist*, 3:232 (June 28, 1890); *Chicago Tribune*, September 18, 1890. At the St. Louis meeting, Northern Alliance groups from Kansas and South Dakota joined the more aggressive southern organization and by July, 1891, there were Southern state alliances in Indiana, Illinois, Michigan, North Dakota, and Wisconsin, as well.

to join the Southern Alliance and representatives from the Illinois group attended the Meridian, Mississippi, meeting where the Agricultural Wheel joined Macune's organization. Fred G. Blood headed the F.M.B.A. delegation and played a prominent role. Besides suggesting the name, Farmers' and Laborers' Union, which the southerners accepted, he was chairman of the committee which established the *National Economist* as the official journal of the Southern Alliance, and he served as a convention officer. Moreover, Blood cooperated in formulating plans for the merger and gave his "concurrence" to the arrangements aiming at consolidation. At the same time, he led the southerners to believe that the F.M.B.A. would quickly secure the support of three-fourths of its county assemblies necessary for the ratification of the agreement.[40]

It was 11 months later, November, 1889, at the Mt. Vernon, Indiana, meeting of the general assembly that the delegation made its report and strongly recommended that the order accept the advantages of unity and ratify the terms of the consolidation outlined at Meridian. Although the supporters of union claimed that preliminary reports showed that over three-fourths of the county assemblies were favorable, the opposition of prominent leaders prevented any action. The assembly was particularly impressed by the eloquence of John P. Stelle, who pointed out that the Farmers' and Laborers' Union had no legal existence, such as the F.M.B.A. had secured two years earlier, that consolidation would necessitate heavy expenditures, and that, finally, the proposed union would lead to the "loss of our name and all that we hold dear." As a result, the general assembly postponed for one year any consideration of consolidation but consented to send a delegation to the St. Louis meeting to present fraternal greetings and "pledges of cooperation."[41] But, cooperation did not satisfy Blood and his followers. Therefore, they attended the St. Louis convention where they were initiated into the Southern Alliance and were chosen to lead the organization into Illinois.[42]

The first local group of the Southern Alliance in Illinois appeared in Richland County when Blood organized a club at Noble, December 27, 1889. The great strength of the F.M.B.A. in that area precluded any widespread development, however, so it was in west-central Illinois that the Southern Alliance achieved its greatest successes. The first county alliance was established at Clayton in Adams County, April 5, 1890, and, as early as July, 1890, southern leaders claimed 2,000 members in at least seven county organizations. Three months later, official figures showed 13 counties organized with a membership of 3,473 in 160 lodges. A temporary state alliance was formed at Morrison, July 15, 1890, and the permanent organization was established at Springfield, October 28, 1890.[43]

In philosophy, the Farmers' Mutual Benefit Association was similar to other great farm orders of the period. As the order proclaimed, "It is universally admitted that every profession and business . . . looks either directly or indirectly to the farmers for sustenance," the members of the group firmly believed that agriculture constituted the most important segment of society.[44] But the obviously depressed state of the countryside, reflected

[40] *National Economist*, 1:386 (September 7, 1889) 2:242; (January 4, 1890) 1:57; (April 13, 1889); *Farmers' Voice*, January 5, 1889; Dunning, *Farmers' Alliance*, 89-95; W. Scott Morgan, *History of the Wheel and Alliance* (Fort Scott, Kansas, 1889), 143; Blood, *Handbook and History of the National Farmers' Alliance*, 39; *Western Rural*, August 10, 1889; *Prairie Farmer*, 61: 448 (July 13, 1889), quoting the [Little Rock, Arkansas] *Rural and Stockman*.

[41] *Progressive Farmer*, January 2, 1890; *National Economist*, 2:72 (October 19, 1889).

[42] *Ibid.*, 2:242 (January 4, 1890); *Farmers' Voice*, March 1, 1890.

[43] *White Hall* [Illinois] *Register*, August 29, 1890, December 19, 1890; Dunning, *Farmers' Alliance*, 240-241; *Western Rural*, May 9, 1891; *Jacksonville Daily Journal*, October 21, 1890; *Prairie Farmer*, 62:792 (December 13, 1890); [Springfield] *Illinois State Journal*, October 28, 1891; *Chicago Tribune*, October 29, 1890; Matt Hoots to Ignatius Donnelly, August 11, 1891, Donnelly MSS (Minnesota State Historical Society, Minneapolis).

[44] Farmers' Mutual Benefit Association, *General Charter*, 6.

not only in individual hardship but also in the growing influence of the cities, the decline of rural prestige, and the increasing tendency to picture the farmer as an uneducated simpleton who deserved his fate, showed that the agrarian community was not enjoying the fruits of its productivity. The F.M.B.A. believed that the concentration of wealth in the hands of the few was the major cause of distress. These masses of financial power made trusts and monopolies possible, they produced political corruption which resulted in class legislation, and they exploited the farmer by forcing him to pay excessive prices for necessities but rewarded him with prices for his produce often below the cost of production.[45]

Most southern Illinois farmers believed that the only solution to their problems lay in the use of the methods of business to correct abuses. Not only was industrial organization an accepted fact but labor was learning the value of united strength and, a decade earlier, the Grange had indicated the power of agrarian cooperation. Therefore, while the F.M.B.A. originated in a simple marketing incident, it soon developed a cooperative, educational, and social program which compared favorably with those of larger and more prominent organizations. The official objectives of the order, as stated in 1887, were:

> . . . to unite the farmers of the State of Illinois, and of the United States, in all matters pertaining to the interests of their calling; to devise ways and means whereby they may more effectually promote their general welfare; to improve the modes of Agriculture, Horticulture, and Stock Raising; to adopt and encourage such rotation of crops as may improve rather than impoverish the soil; to devise and encourage such systems of concentration and co-operation as may diminish the cost of production, and of farm life and farm operations; and to secure the best possible returns for farm productions . . .[46]

Although the Farmers' Mutual Benefit Association shared the general farmer dislike for railroad practices, hard money, and lawyer-politicians, it was most aggressive in the field of cooperative business enterprises. Because it originated in such a venture, the F.M.B.A. was especially interested in cooperative buying and selling. Not only did members band together to sell wheat and other small grain but, in some instances, they sold the neighborhood's entire production of wool and other commodities by sealed bids, thereby securing substantially higher prices.[47] Cooperative selling soon led to cooperative buying. An elementary form was the contract system. As a result of negotiation by farmer committees, local merchants agreed to sell goods to members at a fixed percentage above wholesale prices in return for the patronage of the entire group. Ordinarily, farmers considered a 10 per cent margin by businessmen sufficient but, in many cases, the committees were able to secure better terms. For example, members near Springfield bought implements and lumber at prices only 6 and 7 per cent above factory and sawmill rates.[48] Under the stress of competition and united farmer demands, merchants and businessmen offered all types of goods and services, including groceries, drugs, dry goods, harness, binder twine, threshing, and blacksmithing, at substantial savings.[49]

When the contract system failed, other forms of cooperative buying were used. The agency system, by which locals, county groups, and the state assembly appointed representatives to purchase goods directly from the manufacturer or wholesaler, enjoyed considerable popularity. Some lodges bought coal by the carload and others bargained so effectively with machinery manufacturers that members could buy grain binders for $112.50 while farmers outside the group paid as much as $150. Twine was also acquired directly from the manufacturer. Marion County farmers claimed they saved over $2,000 in one season on

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[45] *National Economist*, 2:134 (November 16, 1889).

[46] Bryan, *The Farmers' Alliance*, 70-71; Farmers' Mutual Benefit Association, *General Charter*, 3.

[47] *Albion Journal*, July 26, 1888, June 9, 1887, April 25, 1889, August 10, 1893.

[48] Ashby, *The Riddle of the Sphinx*, 374-375; *Albion Journal*, August 16, 1888; *Chicago Tribune*, January 6, 1890; *Illinois State Register*, February 4, 1890.

[49] *Ibid.*, January 14, 1890; *Albion Journal*, January 17, 1889, June 6, 1889, August 22, 1889.

purchases of it.[50] A third type of activity was farmer-owned stores and other businesses. Although there were Grange stores operating as late as 1887 which had been established in the 1870's, the F.M.B.A. excelled in the development of such projects.[51] Most of the stores operated on a modified Rochdale plan by which goods were sold at competitive prices to any customer but net profits were distributed to shareholders as rebates in proportion to the value of goods purchased by each. The initial investment in a typical concern amounted to $5,000 which the members raised by purchasing $10 shares.[52] Total numbers of such stores are unknown, but critics claimed that in southern Illinois they were so numerous that normal trade was almost wiped out. In some areas, farmers were able to acquire practically every kind of merchandise from their own outlets. In Pana, Taylorville, and Moweaqua, dry-goods, grocery, hardware, and farm-machinery stores existed while Blue Mound contained dry-goods and grocery stores. Marshall, Edinburg, Grayville, and Alton were only four of the other communities having such farmer enterprises.[53]

The development of country stores led to the desire for farmer cooperatives operating on a wider scale. The result was the establishment of county exchanges, containing a centrally-located market with branches in the neighboring towns. Such concerns not only sold merchandise but also purchased small produce, including eggs, poultry, and cream. By 1890, they existed in Washington, Hamilton, and Williamson counties.[54] The F.M.B.A. considered going even further in its cooperative ventures and, in the course of a series of meetings in Centralia in 1889 and 1890, approved the establishment of an Industrial Cooperative Society designed to do all wholesale buying for the local stores in the state and to serve as a market for the small produce received at the exchanges.[55] The plan proved too comprehensive, however, and was not put into operation.

Besides country stores and their supply centers, members formed numerous other types of enterprises when they thought the middlemen operating the usual concerns were exploiting them. State legislation provided a guide for farmers wishing to establish cooperative enterprises of all kinds and, between 1880 and 1894, agricultural groups incorporated 44 concerns.[56] A majority of the firms operated in the southern half of the state and it is safe to assume that more than 50 per cent were established under F.M.B.A. control. At Cerro Gordo, in Piatt County, a local established an elevator and scale company with a capital stock of $10,000, while farmers in Shelby County purchased a grist mill and did their own work. Another elevator existed in Jerseyville. A typical milling company announced as its purpose the operation of a general flour mill and the establishment of a market for other farm produce. Incorporated with a capital stock of $10,000, the firm sold shares at $10 to 82 original share holders. In at least one case, an F.M.B.A. group formed a cooperative bank.[57]

Other forms of economic cooperation may be cited. In 1890 the F.M.B.A. purchased a share in the American Livestock Commission Company, one of the first cooperative livestock-selling agencies operating in a

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[50] *Mt. Vernon Register*, March 5, 1890; *Western Rural*, February 22, 1890; *National Economist*, 2:134 (November 16, 1889).

[51] *Illinois State Journal*, December 14, 1887.

[52] Herbert Myrick, *How to Cooperate* (New York, 1890), 17, 25, 35; *Western Rural*, March 22, 1890.

[53] *Illinois State Register*, April 1, 1890; *Mt. Vernon Register*, December 4, 1889; *White Hall Register*, January 23, 1891; *Champaign County* [Illinois] *Gazette*, January 25, 1888; *Western Rural*, March 22, 1890.

[54] Index to corporations, 1886-1892, MSS (Illinois State Library, Archives, Springfield), pp. 144-145.

[55] *Mt. Vernon Register*, December 18, 1889, March 12, 1890; *Chicago Tribune*, March 5, 1890.

[56] *The Industrial Struggle*, 60-61; Index to Corporations, 1881-1896, MSS. It is apparent that many local cooperative concerns existed without the formality of state incorporation.

[57] *Oquawka* [Illinois] *Spectator*, October 29, 1890; *Western Rural*, February 28, 1891; *Illinois State Register*, May 6, 1891; Charter of the F.M.B.A. Milling Company, MSS, Box 552, No. 22483; Charter of Farmers' Elevator Company, MSS, Box 525, No. 20572 (Illinois State Library, Archives, Springfield); *Oquawka Spectator*, June 4, 1890.

terminal market.[58] In addition, the organization was the sponsor of at least a few of the 181 mutual fire insurance companies existing in Illinois by 1892 although it appears that the Grange devoted more attention to such activity. As a further evidence of the lack of interest in the insurance field, the F.M.B.A. considered but never completed formation of a life insurance company although the Illinois State Grange established its Patrons Aid Society as early as 1882.[59]

In its official meetings, the educational and social features of the F.M.B.A. were less prominent than those of the Grange or the National Farmers' Alliance. Undoubtedly, the failure to include women as active participants contributed to the lack of interest in social matters. Wives of members established a ladies' guild which flourished in some areas but the association made no provision for the woman's presence in the official business of the order.[60] However, unofficial and many local meetings were very much like those of contemporary groups. Discussion of leading questions, short speeches, and dinners were interspaced between business sessions.[61] Like the Grange, the F.M.B.A. was a regular sponsor of picnics and, in some areas, cooperated with other groups in holding them. In Edwards County, relations between the F.M.B.A. and the Grange were so friendly that a combined harvest feast was an annual event, and in other localities the order cooperated with the Knights of Labor.[62] The F.M.B.A., in fact, seemed to enjoy picnics and barbecues more than any other group. An opposition paper claimed that "broken-down political cranks" usually appeared in large numbers, but it appears that the F.M.B.A. devoted more time to eating, dancing, and other festivities than in discussing the causes of distress. A writer for a Chicago paper reported that, at the meetings, business was freely mixed with pleasure and "one of the greatest attractions was a dancing platform [which] began operation early in the day [and continued] hour after hour, always on the same tune. Dancing in southern Illinois is in some respects a question of endurance."[63] The Fourth of July regularly served as an excuse for a rally where members appeared equipped with badges, banners, and brass bands, creating a spectacle which not only broke the monotony of farm life but also amazed the townspeople.[64]

Although some meetings were followed by festivities lasting until four in the morning and critics were certain that liquor was present in large quantities, the local gatherings also had educational features. For example, at a large picnic held near Godfrey, members heard speeches by Lindley, Edward S. Wilson, Democratic candidate for state treasurer, and Normal J. Colman, editor of *Coleman's Rural World* and former Secretary of Agriculture.[65] More common, however, were meetings in school houses, town halls, and private homes where farmers discussed topics dealing with agriculture and rural life. The care of fruit trees, the advantages of mixed farming, and the use of clover as a soil-building crop were typical topics but questions of national and state importance were not ignored. The F.M.B.A. also sponsored local fairs where members learned new methods, examined the latest farm equipment, competed for

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[58] Myrick, *How to Cooperate*, pp. 222-226; Fred A. Shannon, *The Farmer's Last Frontier: Agriculture, 1860-1897* (Vol. V. of *The Economic History of the United States*, Henry David and others, eds., New York, 1945), 336-337; Farmers' Mutual Benefit Association, *Proceedings, 1890*, 13-14.

[59] Illinois State Grange, *Journal of Proceedings, 1892* (Peoria, 1892), 50-51; *Centralia Daily Sentinel*, March 5, 1890; Jeanette E. Yates, History of Fifty Years in Illinois State Grange (Mimeographed pamphlet distributed at annual session of the Illinois State Grange, 1946), 3.

[60] *St. Louis Globe-Democrat*, July 5, 1887.

[61] *Albion Journal*, December 19, 1889); *White Hall Register*, February 10, 1891.

[62] *Albion Journal*, July 26, 1888); *St. Louis Globe-Democrat*, July 5, 1887.

[63] *Mt. Vernon Register*, August 28, 1889; *Chicago Tribune*, August 10, 1888.

[64] *Albion Journal*, July 12, 1888.

[65] *Alton Sentinel-Democrat*, September 18, 1890, September 4, 1890; interview with John H. Nowlan, Greenville, Illinois, August 24, 1956.

prizes, and exchanged neighborhood gossip.[66]

The subsequent history of the F.M.B.A., which is beyond the scope of this study, parallels that of other elements of the Alliance movement. Originally, the organization was nonpartisan, limiting its participation in political matters to the drafting of petitions and resolutions which were sent to legislators.[67] Such statements proved to be little more than pious expressions of hope so, by 1887, the association called for the development of an independent spirit among farmers which would destroy narrow partisanship and allow members to vote for candidates of either party who best represented the wishes of the rural community. A spokesman, expressing this goal, said, "We do not expect to correct these evils [agricultural abuses] . . . by forming a new political party . . . but by educating the farmers . . . to use their right of suffrage for men who possess the true qualifications for office, regardless of party or politics."[68] But with the growth in size and power of the organization, many leaders came to believe that only by the formation of a new party could the farmer overcome the conservatism and corruption of the old political groups. As a result, the F.M.B.A. gradually drifted into politics, participated in the election of 1890, and, a year later, merged with the newly-formed Populist party.[69] The third party leaders, however, were never able to transfer the allegiance of an appreciable number of Illinois farmers and, in the attempt, destroyed the F.M.B.A. By 1893, there were less than 8,000 members in the state and the general assembly had ceased to function.[70]

The F.M.B.A., like the larger movement of which it was an important part, faded from the scene, but it must not be considered a failure. The association gave the isolated farmer of southern Illinois a social medium, it exposed him to new ideas and techniques, enlightened him as to the nature of his distress, and reduced the monotony of farm life. The movement taught the value of cooperative business enterprises. Crude as many of them were, the history of later groups in the area indicates that many precedents were adopted and expanded into notable accomplishments. Finally, the F.M.B.A. was a voice of protest. Although localized, the organization contributed to an attack on the nineteenth century concept of *laissez faire* which prepared the way for new ideas later expressed in the programs of progressivism and the New Deal.

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[66] *Albion Journal*, May 9, 1889; *Illinois State Register*, August 20, 1890; *Centralia Daily Sentinel*, February 1, 1890, February 13, 1890; *White Hall Register*, August 7, 1891; *Chicago Tribune*, August 25, 1890.

[67] *Albion Journal*, March 21, 1889; Bryan, *The Farmers' Alliance*, 72-73.

[68] *National Economist*, 2:135 (November 16, 1889).

[69] Roy Vernon Scott, "Agricultural Organizations in Illinois, 1880-1896" (Unpublished thesis, University of Illinois), 210-227; *National Economist*, 6:179 (December 5, 1891); *Illinois State Journal*, October 20, 1891, October 21, 1891, October 22, 1891; *Illinois State Register*, October 22, 1891.

[70] *Western Rural*, 31:165 (March 18, 1893); *Progressive Farmer*, January 3, 1895, January 31, 1895, August 8, 1895; Scott, "Agricultural Organizations in Illinois," 260-263.

THE FARMER IN A BUSINESS SUIT

The farmer in a business suit has taken the place of the old homesteader. His horsepower is bred in factories and his stock is fed by the white-frocked scientists in the laboratories that produce those fabulous substances known as antibiotics and hormones. His family farm is a costly, efficient, revved-up complex of fields, barns and equipment with a gluttonous hunger for capital and managerial know-how. His productivity is a hundred, a thousand times his family's own needs. His harvests flow through myriads of enterprises and arrive in your kitchen cleaned, prepared and processed as if by built-in maid service.—John H. Davis and Kenneth Hinshaw, *Farmer in a Business Suit*, 1957.

The Agricultural Memorandums of Samuel H. Black: 1815-1820

C. M. ALLMOND, *Editor*

Agricultural progress in nineteenth century Delaware during the transition from the "time tested" methods to the "scientific" approach to farming was spearheaded largely by the more prosperous landholders of the state. The average farmer was financially unable to experiment with untried practices. Most of the early nineteenth century growers were too involved in merely trying to wrest a living from the often inadequate soil to give much serious attention to perfecting better farming techniques. Of course, there were no state or federally supported agricultural experiment stations in those days; consequently, the burden of investigating new ideas and improving the region's agriculture fell on the shoulders of a few wealthy, prominent citizens, the agricultural leaders of their time. Such a man was Dr. Samuel Henry Black, of Glasgow, Delaware.

Black, the son of David William and Margaret Ferris Black, was born in New Castle County, Delaware, December 20, 1782. He received a liberal education and began the study of medicine at the age of 19 under Dr. John Groome, of Elkton, Maryland. After completing his medical studies at the University of Pennsylvania, Black settled at Glasgow, where he practiced his profession for 20 years. His sizable practice included a large area in northern Delaware and nearby Maryland; he often made calls in the towns of Elkton, Middletown, Newark, and Port Penn. He died April 17, 1827, a few hours after an apoplectic seizure, leaving a widow, Dorcas Middleton Black, and nine children.[1]

Black's farm at Glasgow was called "La Grange" (The Farm), a name reputed to have been suggested to him in 1824 by Lafayette, whose own estate in France was entitled "La Grange." The house, built in 1815, is still standing.

He had one of the finest private libraries in the state and was a popular writer and lecturer on both agricultural and medical subjects. He successfully ran for public office several times, serving terms in the Delaware General Assembly as state senator and as state representative.[2] In 1823, the state legislature, then under Democratic control, met to choose two men to fill vacancies which existed in the United States Senate. Willard Hall was the unanimous choice for one seat, but the other was hotly contested by Black and George Read, Jr. The result was that the legislature, split by party strife, was unable to make a choice, and no election was held. This left Delaware without representation in the Senate, a situation which was remedied quickly by the Federalists later in the year.[3]

In a letter published in 1821, Black discussed the need for the establishment of a state college in Delaware and proposed that it be located in the town of Newark, which he described as being "ideally suited."[4] Several other leading citizens also backed the plan, and a few years later in 1833, the General Assembly passed a bill incorporating "the Trustees of Newark College." "Newark College," as it was known, opened in 1834.

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[1] Lewis P. Bush, "Medicine and Medical Men," in J. T. Scharf, *et al.*, *History of Delaware, 1609-1888* (1888), 1: 485.

[2] Scharf, *et al.*, *History of Delaware, 1609-1888*, 1:408-409; Henry C. Conrad, *History of the State of Delaware* (1908), 1:264-273.

[3] John A. Munroe, "Party Battles, 1789-1850," in H. Clay and M. B. Reed, eds., *Delaware: A History of the First State* (1947), 1:146.

[4] *Delaware Gazette* (Wilmington), April 24, 1821.

The name was changed to "Delaware College" nine years later, in 1843.[5] The college developed through the years into the present-day University of Delaware.

Black was an enthusiastic advocate of smallpox vaccination at a time when there was considerable mistrust and opposition to such inoculation by both the general public and by some members of the medical profession. To demonstrate his faith in Edward Jenner's discovery, he took his young son, Robert, who had been previously vaccinated, to Cooch's Bridge, Delaware. There was at that place an encampment of Indians, en route to Washington, D. C., among whom were several cases of smallpox. Because he had been immunized, Robert did not contract the disease and the experiment was successful. This did much to convince the community of the benefits of vaccination.[6]

Delaware agriculture, during Black's lifetime, went from a period of prosperity to one of depression, and by the time of his death, spurred by new scientific developments and the rising level of national prosperity, it had again started to progress.

In describing the agriculture of Delaware in 1807, Joseph Scott wrote:

> There is not perhaps, in the union, a state which raises a larger proportion of good wheat than Delaware. It is particularly sought after by the manufacturers of flour. Indian corn, rye, buckwheat, barley, flax, and potatoes, are not found of a better quality, or in greater abundance in any part of the union. Apples, pears, peaches, plums, several kinds of cherries grow in great perfection and abundance, besides various kinds of vegetables, roots, and small fruits.[7]

Jedidiah Morse stated that the wheat produced in the low lands of Delaware was of "uncommon softness and whiteness," and was superior to the hard, flinty grain generally grown on the higher lands of Pennsylvania. He also ventured the opinion that "hemp, cotton, and silk, if properly attended to, doubtless would flourish very well."[8]

A few improvements in Delaware agriculture were made in the first decade of the nineteenth century. Gypsum (calcium sulfate) or "land plaster," as it was called, was shipped to Wilmington from the coast of Maine and came into use as a fertilizer. The value of marl, however, was not recognized at this time and limestone was unknown in the state except in the immediate vicinity of Wilmington. Many of the areas formerly covered with native grasses were reseeded with timothy and clover, and some of the abandoned fields around Wilmington were reclaimed and planted in wheat. The rapidly expanding flour milling industry on the Brandywine Creek provided on ever increasing market for locally grown wheat.

These advances were hardly under way, however, when the end of the War of 1812 and the Napoleonic Wars in Europe in 1815 brought about a sudden drop in the demand for American agricultural products. This was a serious blow to the United States of 1815, for nearly 90 per cent of the population depended on agriculture for its livelihood. By 1819, the country was in the throes of widespread economic depression. The increased interest in westward expansion heightened the problem in Delaware and other Atlantic coast states. In the decade from 1810 to 1820, the state's population remained stationary and only increased very slowly until after 1840.[9] Delaware soils, at that time, were more neglected and depleted than they had ever been, and crop yields were meager.

Many influential men of the state urged farmers to stay in Delaware and build up their impoverished soils with improved agricultural methods, rather than move to the virgin lands of the west. Among the more ardent campaigners for the betterment of Delaware agriculture was S. H. Black. In an address to the Agricultural Society of New Castle County in 1818 he said: "Our land for the last fifty years has done little more than starve its proprietors or has driv-

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[5] J. H. Caldwell, "Delaware College," in Scharf, *et al. History of Delaware, 1609-1888*, 449.

[6] Bush, "Medicine and Medical Men," 485.

[7] Joseph Scott, *A Geographical Description of the States of Maryland and Delaware* (1807), 161-162.

[8] Jedidiah Morse, "Delaware," *The American Gazetteer*, 1810.

[9] Harold Hancock, "Agriculture in Delaware, 1789-1900," Reed and Reed, eds., *History of the First State*, 1:374.

en them to the sale of it." He also stated that the average crop yields for the state were only 5 bushels of wheat per acre, 10 of corn, and 15 of oats, although experiments with fertilizer had demonstrated the possibility of 40 bushels of wheat, 80 of corn, and 200 of potatoes. He recommended the abandonment of the four-field system, the use of fertilizers, and the cultivation of land by owners rather than by tenants. He predicted that westward migration would cause the state to be deserted within a few years.[10]

Concluding his talk, Black observed:

> . . . from the situation of our land generally in this country, at the present time, when cultivated by the owner, according to the prevailing [sic] mode, it nets him, clear of taxes, repairs, and labor, nothing, and it is not improving in quality or fairly advancing in price. And when it is cultivated by tenants, themselves, and ther families and stock, must be deprived of a portion of what is justly due them, or the land owners must lose their rents. And when rents are obtained by pressing, as it were, the vital blood from the occupants, more is lost in the destruction and wreck of the property than is gained by the proprietor in money or produce; and consequently, that neither landlords nor tenants gain anything, nor ever will, so long as affairs remain as they are at present; every cultivator of a poor soil on lease, being in fact but a fashionable day laborer, and every owner of such land, if his only resource, no more than a splendid pauper.[11]

Admittedly, many of Black's statements were made with some exaggeration. Through his efforts and those of his contempories, however, the "scientific revolution" in Delaware agriculture was kept alive during the hard times of the early 1800's. The farming population of the state was made a little more receptive for widespread improvements which began to appear in the late 1820's and early 1830's, such as the use of limestone and marl, and clover as a green manure crop.

The Agricultural Memorandums of S. H. Black cover a period of five years, from 1815 to 1820. They are important because they describe some of the experimental work carried out by a man who exemplified the Delaware agricultural leader of the early nineteenth century. In them are found descriptions of Black's usage of limestone, 10 to 15 years before its general acceptance by Delaware farmers. His methods for growing corn and potatoes on poor soils are also discussed. The Memorandums give a glimpse of agricultural conditions of that time, touching on such topics as weather, prices, insect pests, and cropping theories then in vogue.

Black kept the memorandums in a bound notebook. This notebook is now in the possession of the Memorial Library of the University of Delaware and was the gift of Miss Lena Evans, of Newark, who was a descendant of Black. The memorandums have been hitherto unpublished. Editing has been limited primarily to punctuation changes and rearranging of notes by years to make the material more readily understood by the reader. The original spelling has been retained and the memorandums have been transcribed in their entirety.

AGRICULTURAL MEMORANDUMS

[Notes for the Year 1815]

October, 1815. Purchased 300 bushels of stone lime from John Tweed, for which upon delivering I paid $40 per 100 bushels. This, together with 150 bushels of oystershell lime, I laid down upon nine acres of ground, previously flushed[12] about 3 inches deep, and divided it in 3 lotts of equal size.

Upon lott No. 1, I sowed 4 bushels of smooth wheat without manure, and harrowed in rather carelessly.

Lott No. 2. Limed as aforsaid Oct.—1815. Flushed and sewed down immediately in timothy.

Lott No. 3. Limed as 1 and 2—fall of 1815.

[Notes for the Year 1816]

Lott No. 1. The following spring [1816] I sowed upon the wheat timothy and clover seed, in the proportion of one pint of the former to 3 of the latter at the rate of about

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[10] *Ibid.*, 375.

[11] S. H. Black, in *Memoirs of the Agricultural Society of New Castle County*, 1:1820.

[12] "Flushed" evidently means harrowed or cultivated.

one bushel for 10 acres.[13] The following harvest, I took off about 27 bushels of wheat, weighing upwards of 60 lbs. to the bushel, although considerably matted, owing, as I supposed, to the coldness of the season.[14] This lott was pastured until late this fall.

Lott No. 2. Spring of 1816. Grass appeared bad; not well sewed. The preceding fall being remarkably dry and cold, the seed did not vegitate.[15] April—Sewed upon the same lott clover and timothy, in the same proportions and same quantity as upon No. 1; and at harvest cut from the three acres about one ton of hay.[16] Pastured as No. 1.

Lott No. 3. Spring of 1816. Flushed again, harrowed, and struck out in rows 4 feet apart. In one of these furrows I planted corn, one grain about every 10 inches, and in the intermediate rows, potatoes, with [short?] yard manure principally. From this lott I computed there was about thirty bushels of corn, nearly all soft, as the coldness of the season and the early frost destroyed all crops in the country in common with mine.[17] From the same lott was taken full 300 bushels of potatoes. About half an acre of this lott was planted in corn the pattent plan. That is to say, squares four feet each way were dug out with the spade in the spring. In each of these was placed about half a bushel of coarse manure; the dirt returned. Upon Upon which 4 hills of corn was planted upon each square, the squares 10 feet apart. This gave upon the ground nearly as many stalks as the ordinary mode of planting that grain. No tilling whatever was allowed to this corn except what it might have received by plowing 2 rows of potatoes which was planted between each row of squares. This corn was slow in coming up, and for the first 3 weeks had a bad appearance. After this, its growth was rapid beyond anything I had ever seen until the middle of August, after which it burned in the lower leaves considerably. This, I think, might be obviated by plowing the ground both ways between the squares, and if so managed would, I think, produce much more corn upon any given quantity of *poor* land than by planting in the common way. Nor wants much manure, or additional labor required.

I have computed that four good cart loads of manure would plant an acre in this way. One hand will prepare the ground, put in the manure, and plant half an acre in a day. I am satisfied that the same proceeds of manure can in no other way upon a corn crop, be so eazily obtained as in this. That from this ½ acre under all the disadvantages of a *first* experiment [I harvested] about 6 bushels of good corn. It was, perhaps, the only good corn indeed which I had that season.

From this lott I removed the stalks, flushed about 3 inches deep, and sewed 4 bushels of the red chaft bearded wheat.

[Notes for the Year 1817]

Lott No. 1. Spring, 1817. Sowed upon the grass 4 bushels of the plaister of paris—and in June cutt from the three acres about 1½ tons of excellent hay. Attributed the lightness of this crop to the dry spring and having pastured upon the ground too much the preceding fall.

Lott No. 2. Spring, 1817. Plaistered this as No. 1, and in July cut 78 cocks of hay, about equal to 3 tons.[18]

Lott No. 3. The following spring [1817] I sewed clover and timothy seed as upon 1 and 2; but either from the dryness of the spring or the badness of the seed, it did not vegitate well. Little of it ever came up. At harvest, I cut from this lott, in spite of the fly, which committed great ravages in the

[13] The present recommended rates and dates for planting these crops in Delaware are: Wheat—1½ to 1¾ bushels per acre; October 10 to 30. Timothy—4 to 6 pounds per acre; seeded with grain in the fall. 8 pounds per acre when seeded on top of the ground in late winter. Red Clover—8 pounds per acre; seeded on top of the ground in late winter.

[14] The 1947-56 ten-year weighted average wheat yield in Delaware was 19.9 bushels per acre.

[15] "Vegitate" as used here means germinate.

[16] The 1947-56 ten-year weighted average timothy-red clover hay yield in Delaware was 1.5 tons per acre.

[17] The 1947-56 ten-year weighted average corn yield in Delaware was 43 bushels per acre.

[18] The practice of curing hay in small piles or "cocks" rather than in windrows was common before the advent of the horse-drawn hay rake.

wheat crop this year, 61 dozens, making 28 bushels of good wheat.[19]

It may be proper to remark that when I took this land into my hands, it was extremely poor, never within the memory of any man alive produced upon an average more than 4 bushels of wheat, 10 of corn, and about 10 of oats. No grass of any kind had ever been sewed upon it.

Spring 1817. Flushed lott No. 4, which has not been limed, and planted in corn and potatoes as in No. 3. Although this was not stubble ground, yet the cut worm destroyed nearly the whole of the first planting and much of the second and third.

From this lott, planted in corn and potatoes in alternate rows, had this year forty bushels of corn, and 300 of potatoes. Upon the whole was used about 100 loads in a one horse cart of [weak?] yard manure. The corn and potatoes being removed, the ground was flushed and sewed with 5 bushels of red chaff bearded wheat.

Lott No. 5. Flushed for buckwheat, which I intend to sew, presuming that in this way the ravages of the worm in the corn next year may be prevented. Am informed, however, that buckwheat will injure the crop of corn. Wish to test this by experiment.

From lott No. 5 had 19 bushels of buckwheat.

[Notes for the Year 1818]

The season during the commencement verry cold and wet. Vegitation generally backward. Wind much at east and north east. Wheat generally this spring looked bad in the majority of fields. Little, if any more than the seed is expected. This failure is attributed, perhaps greatly, to a severe winter. Much hard frost and no snow. There is, however, little if any Hession fly to be seen; but a profuse appearance of cut worms which is feared will prove destructive to young corn.

Oats sell this spring at 35/100, wheat at $2.00, and corn from 70 to 75/100. Sentiment seems to prevail generally amongst intelligent farmers that the oats crop is destructive to the wheat. This opinion is probably well founded, the oats having a quick growth must tend frownfully [sic] to exhaust the soil.

Spring, 1818. Plaistered at the rate of 17 bushels to the acre No. 1, 2, and 3; all of which were pastured late last fall.

6th June, 1818. In consequence of heavy rains and pleasant weather commencing about the middle of May and continuing [illegible] and [illegible] until this time, the wheat crops have much revived and now promise in this district sufficient, perhaps, for the wants of the neighborhood. Notwithstanding the great appearance of cut worms in the early part of the season, the corn has been found to stand remarkably well and now looks uncommonly promising.

Lott No. 1. July 1. Cut the grass from lott No. 1, making 84 cocks, they being rather less than No. 3. Supposed there might be fully 3½ tons of hay; more than double the crop of last year from the same ground.

At this period there prevails an excessive drought, having been no rain for more than four weeks. The oats crop will be short. The wheat appearing to ripen well, and the corn, where it has been well worked, looks well, independent of the dry weather.

Lott No. 3. June 23. Cut the grass from this lott and upon curing had 65 cocks, each one estimated to weigh 100 lbs. One of them I tryed with steel yards and found its weight 220 [pounds] net, but it not being perfectly dry, supposed it fair to estimate at 100. Thus having from this lott, which was its first produced grass, about 3 tons of hay.

Lott No. 4.—Spring, 1818. Sowed clover and timothy in the usual proportions upon lott No. 4. Cut 6th July 90½ dozen wheat from lott No. 4, making 28 bushels.

Lott No. 5. Flushed this spring after putting down 75 one horse cart loads of raw manure; after which double furrowed and croped [sic] out 4 feet apart and dropped 2 grains of corn opposite the middle, and also opposite the double furrows, thus putting upon the ground double the

[19] "61 Dozens" probably means 61 dozen bundles of wheat, which upon threshing, yielded 28 bushels of grain. The "fly," to which Black refers, is the Hessian fly, a pest in Delaware small grain crops since the late 1700's.

usual quantity of seed. About one-half the corn in this lott was drowned out before it came up by copious rains from the 10th to the 20th of May. Had from lott No. 5 sixty bushels good corn.

In lott No. 6, I have planted potatoes for myself and some others to the amount of half the ground, making—

		In the following order	
for self	23 rows	Self	23
J. Hamilton	17 rows	Hamt.	17
B. Alexander	6 do	Wilson	5
T. Glenn	3 do	Glenn	3
W. Wilson	8 do	Wilson	3
H. Hanson	4 do	Alex.	6
		Han.	4

The manure put upon these potatoes [illegible] was equal to about 75 one horse cart loads, put in the row. I estimate, therefore, that I have put out in all this spring, one hundred and fifty small loads of manure, upon about 4½ acres of ground, inclusive of about 10 loads put on early potatoes.

Had from lott No. 6 two hundred bushels potatoes.

From lott No. 7, new ground, harvested 47 bushels buckwheat and 15 bu. turnips.

[Notes for the Year 1819]

Lott No. 1. This year in corn. Put out in lott No. 1 this spring 100 small cart loads of manure; about 100 more this fall for wheat.

July 1. Put in first crop of grass. Had from lott No. 2, 120 cocks; on No. 3, 70; and on No. 4, 80. Suppose No. 2 better than others from not having cut from it second crop last year, and pastured it but little. Suppose harvested in all from first crop 8 tons hay, got in safely and remarkably fine quality.

Lott No. 5. July 1. Got in wheat. Had only 74 dozen. The wheat was light; I suppose from the ground having been previously in corn and before that in buckwheat.

From lott No. 6, having but 1 acre and 1/10 in wheat, 73 dozen layed bind [sic], 34 doz. of which was [illegible]. This was on poor ground with one manuring on potatoes. The remainder of lott No. 6 put this year in potatoes and [illegible] with some manure.

Planted 1 day July about 1/4 acre new ground in [illegible]. Expect light crop because badly ploughed. Weather dry and no manure used.

July 9. Drought. No general rain for 2 weeks last past and still continues dry. Corn much injured. Oats bad. Potatoes suffering. Wheat crops this year abundant, although some fly and some stunt. Grain full and fine. Harvest commenced as early as the 27th of June, owing in part to early sowing and in part, perhaps, to the dry weather. The grass crop first crop light, 2nd—bad appearance.

[Notes for the Year 1820]

July, 1820. Cut from lott No. 1 this year 92 dozen wheat, badly filled. Injured with fly.

THE WONDROUS VIRTUES OF THE ONION

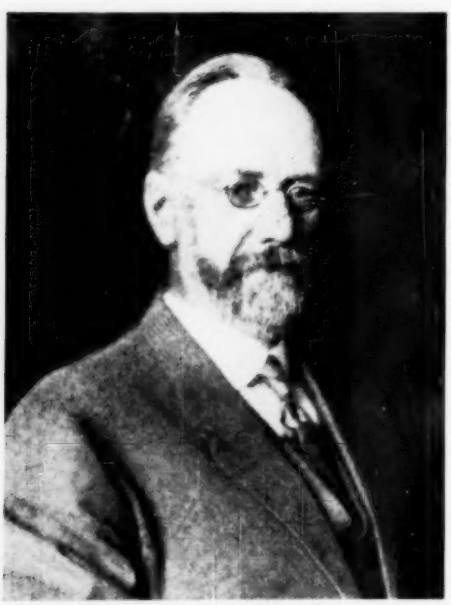
The onion though it be the countrie mans meate is better to use than to taste; for he that eateth every day tender onions with honie to his breakfast, shall live the more healthfull. The juice of onions causeth haire to grow againe. It purgeth the braine through the nostrils. Mingled with hens grease it drieth up the kibes. Applied with a linnen cloth unto burnings it easeth and taketh away the paine. Being mixt with strong vineger it staieth bleeding at the nose, if it be dropt and put into the nose with a feather. An onion rosted upon hot coales, and eaten with sugar, oile, and a little vineger, doth cure the cough . . . the juice is singular good for the noises and deafenesse of the eares, being dropt into them.—Leonard Mascall, *The Countryman's Jewel, Days in the Life of a Sixteenth Century Squire.*

Hardy Webster Campbell (1850-1937)

MARY W. M. HARGREAVES

Hardy Webster Campbell was most notably a publicist, the most widely influential apostle of dry-land agriculture development in the United States.* He was also himself a pioneer farmer in the semiarid region. The latter status engendered much of his appeal to his contemporaries and raises him from the ranks of speculative land promoters in the purview of the agricultural historian. At the same time, the value of Campbell's tillage recommendations derived from this "practical" experience formed a controversial issue throughout his long and active life. In large measure the criticism grew out of the promotional relationships of his role as publicist.

Born on a farm in Vermont in 1850, Campbell had left home at sixteen and worked at various nonagricultural occupations in the East and Middle West until 1879. Then as he learned of expanding railway construction in Dakota Territory, he filed pre-emption, timber culture, and, subsequently, homestead claims to a total of 480 acres in Brown County. With little previous farming experience, with almost no cash reserve, he began operations in a region which only a decade earlier had still been identified as part of the "Great American Desert," where but five years before the United States Army had been called upon to deliver supplies for the relief of the grasshopper- and drought-ravaged agricultural pioneers.



Hardy Webster Campbell

Conditions favored farming efforts in the area during the early 'eighties—this was the time of the Great Dakota Boom. In 1883, however, Campbell found that crops seeded on land plowed roughly during the dry weather of the preceding autumn yielded much less than those on soil more finely worked in the spring. The following year, with weather more favorable for fall operations, the results were reversed. Considering this anomaly, Campbell concluded that the condition of the seed bed was fundamental to the success of agriculture in the region.

As dry weather recurred and his wheat generally failed during the following year, he noted a green strip of rank, healthy grain extending across a field where a

* This sketch is based primarily upon material included in the author's *Dry Farming in the Northern Great Plains, 1900-1925 (Harvard Economic Studies*, vol. CI; Cambridge, 1957). Detail on Campbell's activities for the Burlington Railroad has been supplied through the kindness of C. Clyde Jones, who included a chapter on this topic in his "Agricultural Development Program of the Chicago, Burlington & Quincy Railroad" (Northwestern University Ph.D. thesis, 1954). The writer is also indebted to the Southern Pacific Company for a summary of Campbell's personnel record while with them and to the Nebraska Historical Society for access to their manuscript collections on George W. Holdrege and Hardy W. Campbell. Campbell's death is recorded in the Office of Vital Statistics, California Department of Public Health.

thoughtless neighbor had driven his wagon and mules on the fall-plowed land. Out of this experience Campbell formulated the basic procedures of his farming system, subsurface packing with frequent shallow cultivation. His reasoning gave him an explanation, for which he found support in the writing of reputable, contemporary soil investigators: with the subsoil compressed, the available soil water moved freely toward the surface; there the carefully maintained mulch checked evaporation, holding the moisture as in a reservoir for use in time of drought. To accomplish the joint operation he designed a special implement, the packer, consisting of a series of wheels with wedge-shaped rims to press the soil firmly at the bottom of the furrow while stirring the surface to a mulch.

With drought prevailing throughout much of the next decade, Campbell persisted in the effort to evolve some formula for successful agriculture under meager rainfall. When a workman inadvertently sowed part of the acreage more lightly than was intended, Campbell discovered that thin seeding gave best returns. In 1894 he adopted Jethro Tull's view that small grain should be seeded in rows so that inter-row cultivation was possible throughout the early part of the growing season. For a time he favored leaving the land fallow in alternate years. By 1896 he was arguing that more moisture could be retained in the subsoil by thorough cultivation of a growing crop than by summer fallowing. Finally, in 1898, he found crop yields so successful on land which had been cultivated while fallow the preceding season that he adopted this procedure, carefully delineating it as "summer culture" or "summer tillage" to stress the difference from customary practice.

By the turn of the century Campbell's program encompassed deep fall plowing (when weather was favorable), sub-surface packing, thorough cultivation both before and after seeding, light seeding, and alternating summer fallow, with the land tilled during the season of fallow as well as in crop years. Despite the experimental approach through which Campbell adopted these procedures, none of them was novel in the agriculture of the region. What was new was Campbell's systematization of the recommendations into a formula which he maintained could assure successful farming of the semiarid lands. Through "Scientific Soil Culture," as he phrased it, the dry farmer could control the moisture for his crops, barring alike the disasters of drought, which at times beset all parts of the country, and the drowning and leaching effects of an overabundant precipitation.

In 1895 Campbell organized a corporation, the Western Agricultural Improvement Society, and launched a journal, *The Western Soil Culture* to disseminate his ideas. His work had brought him to the attention of officials of the Northern Pacific Railroad, who now asked him to conduct five farms in North Dakota as a demonstration of his procedures. The same year he began delivering lectures along the route of the Burlington. In 1896 he managed farms in North and South Dakota, western Nebraska, eastern Colorado, and northwestern Kansas, under the auspices of the Burlington, the Northern Pacific, and the Soo lines. By the next season, when the Elkhorn Railway joined in the program, Campbell's supervision extended over forty-three farms. Finding this schedule too comprehensive for careful management, he concentrated the effort in 1900 on land selected from the 20,000 acre tract which James P. Pomeroy of Boston had been trying unsuccessfully to sell at Hill City, Graham County, western Kansas. Campbell's success there, widely advertised by the Union Pacific Railroad, led the Burlington line to provide land and a small monthly stipend for continuing his experiments at Holdrege, Nebraska. This relationship, begun in 1903, was prolonged through 1916, with Campbell also lecturing widely over the route of the railroad and organizing and directing programs for co-operating farmers. In 1907 Campbell announced the expansion of his lectures to the route of the Santa Fe. For a brief period in the autum of 1912 he also worked with the Southern Pacific Company as it undertook sale of

its lands in Nevada, and finally in 1916 he transferred his major activities to this line. He continued as Farm Advisor for the Southern Pacific, chiefly in the development of the Antelope Valley of California and the Metropolis area of Nevada, until 1926.

While thus professionally identified with various railway companies, Campbell independently maintained an active program to publicize his views. He lectured widely —in the northern Plains during 1909 and 1910 and again in the early 'twenties, in the central Plains and the Southwest for a decade after 1905, and north from his California base to Oregon and Washington during his later years. In 1902 he published a *Soil Culture Manual*, which was revised and enlarged in editions of 1905, 1907, and 1914. Translated into German, this work was widely distributed abroad. In 1907 he also issued a *Soil Culture Almanac;* in 1914, *Campbell's Farming for Profit;* in 1916, *Campbell's Progressive Agriculture;* in 1925, *The Campbell System of Seed Bed Preparation.* He wrote extensively for agricultural periodicals, notably the *Nebraska Farmer;* and in 1908 he founded a second personal vehicle, *Campbell's Scientific Farmer*, which prior to its transfer to a Billings, Montana, business man in 1914, had attained a circulation reported in excess of 30,000. From 1907 through 1914 Campbell conducted a Correspondence School of Soil Culture, offering courses in dry-land tillage, irrigation farming, horticulture, and farm engineering. Gifford Pinchot, then prominent for his recent controversies as head of the United States Forestry Service, was listed as an instructor in 1913; and students were drawn from semiarid districts as far afield as Spain and South Africa.

Campbell's most important activity in relation to dry-land development stemmed from his role in the organization of the Dry Farming Congress—and from it arose his most serious setbacks. That body was an outgrowth of the Campbell System Farming Association of Denver, Colorado, the latter group being comprised of local business leaders who undertook to conduct model farms under Campbell's supervision and to publish literature, maintain exhibits, and hold regular meetings for instruction in dry-farming procedures. The Dry Farming Congress was launched at Denver in January, 1907, at the call of spokesmen for these interests, but with the organization expanded to include representatives of agricultural research institutions as well as of business concerns in other dry-farming centers. The first session of the assembly unanimously endorsed a resolution "approving the fundamental principles of soil culture as practiced by Professor H. W. Campbell. . . ." The Congress flourished to become the formal embodiment of the dry-farming movement, but at its second meeting, the following year, Campbell was acclaimed only for his service to the "commercial development of dry farming." Subsequently specific identification of the organization with his program was carefully avoided.

The agricultural scientists drawn into the enlarged movement had found much to challenge in Campbell's leadership. They questioned most of his procedures—the alternating fallow, fall soil preparation, smooth cultivation, inter-row tillage of young grain. They doubted the necessity for Campbell's specially designed implements—the packer, a combined drill and cultivator, a disc harrow with blades set almost horizontally for shallow cultivation, and in the early 'twenties a power version of his drill and cultivator. The last of these represented Campbell's concession to the demand for large-scaled operations, a requirement which constituted a fundamental objection to the intensive tillage of his System. Some of Campbell's Denver supporters had differed with him on the issue of farm size as early as 1906; Federal agricultural experts, noting the costs of fallow land and fine cultivation, emphasized the importance of maximizing the narrowly marginal returns under dry-land cultivation.

In many respects the criticism of Campbell's recommendations ran counter to views which reputable agricultural leaders

had themselves long espoused. That Campbell had, in fact, devised little that was new to farm practice in the region formed a further basis of attack. But his conception of a System, a formula which could assure success, conveyed a panacea-like connotation which conservative investigators found alarming. His railway affiliations and his widespread support from business leaders interested in promoting settlement of the region enhanced this concern.

The skepticism of the scientists' approach seems warranted by the attitude with which Campbell's work was viewed among his railway sponsors. He owed his association with the Burlington almost solely to the support of George W. Holdrege, general manager, who won the reluctant consent of Chicago officials for continuation of the dry-farming experiments "as an immigration and advertising matter." Similarly Campbell's activities for the Southern Pacific were merely an aspect of land sale and developmental promotion.

Neighbors adjacent to Campbell's farm at one time publicly branded him a "faker" and charged that his yield claims were false, his photographs of comparative results, unfair. Yet many farmers wrote testimonials of their success with his methods. Local journalists identified the Campbell System as synonymous with successful non-irrigated agriculture. Even some scientists, notably among the leaders of regional Experiment Stations, accorded Campbell authoritative status. In 1906 and 1907 he was employed by the Department of Agriculture in the Province of Alberta, Canada, to lecture in that area. Perhaps as the high point in his career, he was hired by the Northern Pacific Railway and the Montana Development Association to conduct a "summer tillage" campaign throughout Montana following the great drought of 1917-1920.

To such supporters the conservative criticism aroused great sympathy for "that grand old man, the father of dry farming," much resentment that the experience of "a practical farmer" should be discredited. Campbell's lot was, indeed, pitiable. For over forty years he devoted his life to testing dry-farming technique and disseminating his conclusions. He received no more than $150 a month for his services to the Burlington line, and his later plea for a pension as testimony to his twenty-one years in this work was rejected. That he should have asked for such assistance from the Burlington at the termination of his work for the Southern Pacific is indicative of his anomalous position with the latter road. Until 1941 his name was carried in *Who's Who in America* in recognition of his dry farming "System", yet when he died in 1937 his work was so little known in the contemporary scene that his death certificate identifies him as a Southern Pacific "Fireman".

In regional agriculture today the fallow principle persists as the basic concept in strip cultivation; the requirement for mulching remains in the use of a cultivator to break up stubble and to keep down weeds. These practices bear little relationship to the Campbell System. In a memorable last debate upon the merits of his program, before the Nebraska Historical Society in 1927, the old man repudiated the current reliance upon fallow as the basis for large-scale operations. Always, and increasingly after 1914, his emphasis had centered upon tillage; and his recommendation had been for cultivation after every shower as a means of forestalling evaporation of the soil moisture, not merely as a check on weed growth. Sub-surface packing is now no longer considered. Deep plowing has been supplanted by the stubble "disturbance" of the one-way disk or the duck-foot cultivator. Specialized crop varieties, virtually ignored in Campbell's thinking, have become as significant in dry farming as specialized tillage routine. No "System" has been found to assure success irrespective of weather. Campbell's historical importance rests more on his promotional role in settlement of the semiarid region than on his educational service in the shaping of its agriculture.

Editor's Note: The editors intend to present regularly a brief biographical sketch of some "famous farmer." They will welcome suggestions and invite contributions in this respect.

Book Reviews

The King Ranch. By TOM LEA. (Boston, Little, Brown and Company, 1957, 2 vols., $17.50.)

One of the biggest things in the state of Texas is the King Ranch, and it is fitting that a work which will probably be the definitive history of that institution should also be big—two volumes, with a title page of credits which reads like the opening of a spectacular motion picture. The text, maps and drawings are the work of Tom Lea, the research is by Holland McCombs, annotation by Francis L. Fugate. The typography is by Carl Hertzog of El Paso, and the designing, printing, and binding were all done in Texas.

Tom Lea, who long ago proved he was an artist with words as well as with line and color, writes a slow-moving account that is as powerful as a nineteenth century novel. Some readers may find fault with the excessive details, a few of which will be of interest only to local historians, but agricultural historians will find much of value here in the thorough examination of land deals and the financing of livestock raising, which a century ago required sums that seem vast even by the measure of our inflated modern dollar.

The first volume deals mainly with the life of New York-born Richard King, the founder. We learn how he came to Texas by way of Florida, his fortunate friendship with the taciturn Quaker, Mifflin Kenedy, and how the two moved from steamboating into the exciting new business of raising cattle. We meet such characters as Lieutenant-Colonel Robert E. Lee, Second Cavalry, U. S. Army, who advised Richard King to "buy land and never sell," a piece of advice which became the cornerstone in the structure of King's livestock business. We meet Gideon K. "Legs" Lewis who formed a partnership with Richard King to establish a cow camp on Santa Gertrudis creek in 1852, and so began the King Ranch. And we also meet Richard's bride, Henrietta, who came to the Santa Gertrudis in 1854 to begin a long and happy life as mistress of the great ranch.

The Civil War's effect on Texas is here, too, with Richard King refusing to permit even a war to interrupt work on his ranch or his continuous program of land expansion. An exciting sequence covers the lawless period following the war, and the great overland drives of the 1870's. One drive during this period netted King $50,000 profit.

In the second volume which opens in 1885 following the death of King, we meet the successors, the energetic Klebergs, who though they lived in less colorful times, proved themselves worthy of the standards set by the founder. Here are the more modern stories of the development of the Santa Gertrudis breed through a crossing with the hardy Zebu, the experimental grass improvement programs, and the Quarter

Richard King

Horse breeding plan which has produced some of the fastest race horses in the business, and whose winnings in the millions of dollars certainly would have pleased old Richard King.

Tom Lea's drawings, portraits and maps are mostly wonderful, with only one or two appearing to be a bit too slick and modern to suit the subject matter. The 16-point type is fine stuff for readers with middle-aged eyes. *The King Ranch*, two volumes boxed, is priced at $17.50, but its text and beauty combined with the big readable type make it a Texas bargain, at that.

D. A. Brown
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The Australian Wheat Growing Industry, 1788-1948. By EDGARS DUNSDORFS. (Melbourne, Australia, Melbourne University Press, 1956, xi, 547 pp., $10.00.)

Second only to wool in importance, the Australian wheat industry has always played an important role in Australia's economic history. From the earliest days of settlement in 1788 it has been a staple food item. Since 1865 exports have increased until in 1956-57, at £82 million of wheat and flour, they represented 8% of Australia's export earnings. There are some 250,000 rural holdings in Australia, of which 80,000 are devoted entirely to grazing; 45,000 of the remaining 170,000 farms grow wheat, and the area sown to wheat in recent years (about 10 million acres) represents about half of the area sown to crops in this country.

The literature of Australian rural industries has been enriched in recent years by several contributions in the fields of social and economic history. The records of our early history, a virtually untapped source, are now being drawn on by scholars with a wide range of interests, including several Fullbright scholars from the United States. New light is being thrown on the economic and social forces which, together with unique environmental conditions and our social institutions, have moulded a new nation with traditions and a culture of its own.

Inevitably, much of the attention of economic historians is centered on the rural industries. In recent years R. D. Watt's *The Romance of the Australian Land Industries, The Economic Development of Australia* by A. G. L. Shaw, as well as A. R. Callaghan and A. J. Millington's *The Wheat Industry in Australia*, and C. H. Manning Clark's *Select Documents in Australian History* have all added to knowledge of the historical development of our rural industries. The *Proceedings* of the first meeting of the Australian Agricultural Economics Society, held in Februrary 1957, record some of the contemporary events of historical significance for our rural industries.

Dunsdorfs' new work is one of an increasing number of books providing insight into the historical development of Australia's rural industries. It is a review of "the position of the wheat-grower and his social and economic standing in the community", and a discussion of the economic forces influencing the industry.

In Part I of the book the author traces the development of the industry through the five phases which he identifies in its development in Australia; from the early days of settlement to 1824 when a wheat market was established; to the period preceding the gold rushes of the 1850's; then the years of declining yields per acre up until 1896. Next there was the period of rapid expansion up to 1930 and the final period of more active Government intervention from 1930 onwards. The author appears to be more at ease in this historical review, especially in the earlier periods, than in the more analytical approach adopted in Part II of the book.

After the historical development of the industry has been discussed the author proceeds in Part II of the book to present some analyses of trends and fluctuations over time. The Chapter headings for this Part are: "Trends & Fluctuations", "Cost of Producing Wheat", "Wheat Growing in the National Economy of Australia", and "Population and Wheat Growing". Here the statistical data available are reviewed in detail but the analysis is not very satis-

fying and in some cases it is restricted to the simple description of evident changes recorded in graphs.

Throughout the book Dunsdorfs places great reliance on statistical methods and on available statistics. He has plunged headlong into the wealth of material available and has assembled a great deal of information of interest to students of the wheat industry.

Nevertheless one sets this book aside with a feeling of regret on several counts. The first is that it is far too long. It explores minor points of detail and loses the main theme of the discussion in a way which frustrates the reader's best efforts to follow the argument.

A second cause for regret is that the author has written about Australia from the viewpoint of a European without infusing into his analysis the fresh outlook which might be expected from one who set out on his voyage unfamiliar with the details of our economic and social history. Rather than a fresh outlook, the author brings to his analysis an extraordinary faith in statistics which often leads him to erroneous conclusions which could have been avoided had he familiarised himself with the environmental conditions and other characteristics of the Australian agricultural scene. For example, there is not enough attention to the sheep industry, with which the wheat industry in Australia is so closely integrated.

We can admire Dunsdorfs' courage and ingenuity in using unique bases for his calculations and for the heroic assumptions which he has had to make to establish the relationships he has pursued. But this leads to the third cause for regret—the author's extraordinary faith in regression analyses as a measure of changes over time. The reader is constantly confronted with correlation analyses which stretch one's credulity to the limit, which record relationships sometimes to the sixth decimal point even though the original data are somewhat erratic, and with relationships between variables where the correlation coefficient is so low as to undermine the validity of the argument. Many of these relationships reflect the necessity to use aggregate data which incorporate the effects of a wide range of environmental conditions and of structural variations within the wheat industry, the significance of which can only be described by more detailed analysis of particular sectors of the industry.

One illustration of the extreme dependence of the author on statistical analysis is provided by his study of the relationship between wheat prices and wheat acreages from 1898 to 1940. The author uses a rather unconvincing quadratic equation (p. 363) to express the relationship, so that the area sown to wheat increases as a result of low as well as of high prices, each annual reading being measured as a percent of trend value for the year. The failure to take account of the price relationships between wheat and sheep and other cereal grains has led the author to a conclusion which is not substantiated by his own analysis. The whole analysis presented in the book is founded largely on published statistical information, but reference to the statistical tables and graphs which appear so frequently in the text is not assisted by the author's failure to number tables and graphs.

The kind of economic analysis in the book is also reflected by the author's conclusion, based on his study of costs per bushel from 1914 to 1941, that during the depression years of the 1930's had it been possible to achieve throughout the wheat areas an average yield of 17.3 bushels per acre, "there would have been no need for Government subsidies". This leads him to conclude that "the most important remedy would have been the increase of the average yield". (p.484). To raise the yield to 17.3 bushels would have represented an increase of about 50% which the author considers "not beyond reach" judging from results of manuring experiments. But what would have been the effects on costs? And surely an increase in production of wheat alone would not have been enough to correct the collapse of purchasing power of wheat farmers, quite apart from other members

of the community, so characteristic of the depression years.

It is evident the author has taken very great pains to assemble and analyze the information available on the Australian wheat industry. The great pity of this book is that despite its length there is very little integration of the anlysis of the wheat industry with other phases of Australian agriculture or with other aspects of Australia's economic history.

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Farm Trouble. By LAUREN SOTH. (Princeton, New Jersey, Princeton University Press, 1957, vii, 221 pp., $3.75.)

I am often asked "What is one to read to get an intelligent grasp of the U. S. farm problem?" He then quickly adds, "But do spare me from any more on the mechanics of 'parity', the 'Brannan plan' and the 'soil bank'. Tell me, instead, where to gain some insights about the underlying basic issues." Until Soth's book appeared, there was none that served this purpose. There is a vast literature analyzing particular aspects of the farm problem, mainly by economists, some by sociologists and by students of government. This literature is as a rule fairly technical, e.g. the economist brings to bear price and income elasticities, input-output relations, production functions, distinctions between money and real income and related concepts and estimates. These particular studies are important; in fact, they are essential materials in developing a comprehensive treatment of the farm problem.

Soth has achieved such a comprehensive treatment. He builds on the contributions of economists with knowledge and much skill (Soth began his career as an economist and it has served him well). But he goes beyond economics, for he brings important social and cultural considerations into his treatment. The political realities that shape policy are not neglected; instead his insights and criticism of the role of farm organizations, the agricultural extension services and of the legislative and executive branches of the federal government in making policy and administering farm programs, are penetrating and rewarding.

The 'family farm', 'rural life', 'parity', and the 'middleman' are treated as shibboleths, as they should be. The reasons why agriculture is a sick industry is not over simplified, as it often the case when a general treatment has been attempted. Soth then adds depth by showing that there are all kinds of farmers and that farming is ever more an integral part of our industrial economy. The economic and social characteristics and the very small political influence of the many really poor families in agriculture are done exceedingly well.

What few students of agriculture realize is the dynamic role of new, useful knowledge in farming. Soth sees it clearly. He, also, sees the conflicts of interest that arise as a consequence of this new knowledge and of farm education and their contributions to economic progress. The surplus problem takes him to the fundamental disequilibrium of too many farmers, which is laid open without any over-subtile uses of the Occam razor. Price supports, and other measures to keep farm income up are examined critically. The importance of world trade and of not impairing liberal foreign trade arrangements as has been done by existing farm programs is completely analyzed. The danger of running short of soil resources is, also, seen objectively and with historical perspective.

It would be surprising indeed if there were no issues, in a book as comprehensive as this one, about which one would not wish to express a qualification. They are, however, few and in the main they are not really important. One such is Soth's belief that it would be best to eliminate the migrant farm labor, including foreign farm labor, from the American scene (p. 64-65). Two small slips occur on page 50. We are told that the 'up-and-down movements in supplies' of livestock are 'regular'. Although they are far from 'regular', nothing would be lost for the purpose at hand had the word been omitted. On the same page

we are told that 'a big crop *often* sells for less money than a small one'. 'Often' understates the case; it is almost always so.

Soth is presently editor of the *Des Moines Register and Tribune* and, as one would expect, is a skillful and an effective writer. He has achieved national recognition by winning a Pulitzer prize in 1955 and by being elected Chairman of the Agriculture Committee of the National Planning Association in 1957.

Recently while abroad, as various individuals asked me what to read on the U. S. farm problem, my answer was, "Soth's FARM TROUBLE." When colleagues and lay leaders now turn to me and ask this question, the same answer will serve them.

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Lowden of Illinois: The Life of Frank O. Lowden. By WILLIAM T. HUTCHINSON, (Chicago, University of Chicago Press, 1957, 2 vols. x, 745 pp., $15.00.)

In recent years the biographical approach to history has become important with emphasis upon numerous major and minor figures in our state and national history. While this study presents a detailed account of the life of an American who just missed greatness, it is more than a biography. It also contains a careful and comprehensive analysis of a fifty year period in American History. Volume one carries the subtitle of *City and State* and the second, *Nation and Countryside*.

Frank O. Lowden was born near a small frontier settlement in Minnesota, 50 miles north of St. Paul on January 26, 1861. Moving to north central Iowa as a small boy, he attended a rural school, enrolled for a term at Iowa State College and graduated from the University of Iowa in 1885 as a Phi Betta Kappa. He worked as a farm laborer and taught in rural schools to pay part of his school expenses. After a year as a high school teacher in Burlington, Iowa, he accepted a position in the office of a large law firm in Chicago at a salary of eight dollars a week. He passed the Illinois bar examination in July, 1887, practiced briefly with two different partners and soon set up his own law office. On April 29, 1896, he married Florence Pullman, daughter of George Pullman, the wealthy industrialist. The account of his first decade in Chicago reads like a Horatio Alger story. Shifting his interests from business and law to politics, he was elected to Congress, served a term as Governor of Illinois and was given serious consideration by the Republican Party in 1920 as a possible candidate for the Presidency. After 1920 he lived quietly on his farm, "Snississippi" on the Rock River, directing his major attention to the problems of American agriculture. The death of his wife in 1937 was a severe blow, after which one of his four children usually lived with him. He died in Tucson, Arizona, on March 20, 1943.

Throughout his life Lowden was honestly and sincerely interested in the welfare of the small farmer. He tended to eulogize rural life and always looked back upon his boyhood days on the Iowa frontier with nostalgic remembrances. With the coming of the agricultural depression in the early 'twenties, he became more and more concerned with the plight of the farmer and worked hard to improve his lot. As conditions grew worse in the late 'twenties he came to realize that those who would help the farmer were widely divided as to procedure. He realized the futility of tariffs and actively sponsored plans for cooperative marketing as a means of stabilizing prices and taking care of farm surpluses. Probably the most important shift in viewpoint in his career was the reluctant conclusion that the government, both state and national, must give direct aid to the individual farmer as well as to cooperative marketing. This brought him into an open clash with the leaders of his party who thought that the farmer should be left alone to work out his own difficulties.

The veto of the McNary-Haugen bill by Coolidge and the complete rejection of his ideas on agriculture by the Republican convention in 1928 were real blows to this forward looking and progressive leader. In

1932, he failed again to influence the stand of his party on agriculture and favored the Democratic stand on the subject. He did not declare himself for Hoover and refused on one occasion to sit with him on the same platform at a political rally in Des Moines. He conferred with Franklin D. Roosevelt on his farm program and approved the destruction of pigs as a temporary measure. He stood for a "golden mean" between what he considered to be the extreme extravagance of the New Deal and the obsolete laissez faire approach of the Hoover administration.

The contributions of Lowden in the field of American agriculture cannot be judged by what happened politically. He sponsored much that was new in order to conserve the good in the old which in his thinking was necessary for the preservation of true democracy. He owned several thousand acres of land in Illinois and Arkansas and experimented in farm management, wheat and cotton growing, cattle breeding and diversified crops. He traveled widely making speeches on various farm problems; many of his addresses were printed and widely circulated. He was an active member of numerous farm organizations, in which he held various offices of responsibility. He was a firm believer in agricultural research.

The diversity of his interests and activities is impressive. He had ideas on most current problems including banking, labor, better roads, mail service, state government and foreign affairs. He remained a middle-of-the-road Republican throughout his life and after 1932 worked to rebuild and unite his party. He probably anticipated Theodore Roosevelt on the matter of good and bad trusts as well as certain aspects of the Democratic farm program. Although a wealthy man he was never much concerned with the industrialist. He was an internationalist but refused to sponsor openly the League of Nations. He failed to see the danger of the Nazi regime and before Pearl Harbor was an isolationist and a member of the America First organization. He was honest and forthright in his thinking and was never seriously concerned with inconsistencies and contradictions. He believed in combining theory with action.

The ideal in biography is the patient investigator, who is able to present the life of his subject in such a way as to combine scholarship, interpretation and writing ability. While this biography meets these requirements, the writer does more than recreate the personality of a man. He humanizes the past and by the use of new materials, often presented in fascinating detail, contributes to the historian's knowledge of the period.

Harold E. Briggs
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Dry Farming in the Northern Great Plains, 1900-1925. By MARY WILMA M. HARGREAVES. *Harvard Economic Studies,* CI. (Cambridge, Harvard University Press, 1957, xii, 587 pp., $10.00.)

This book embodies the results of a prolonged and detailed study of a region comprising the eastern two thirds of Montana and the western half of the two Dakotas. The author has explained the origins of a large influx of settlers into this region between 1900 and 1925, has made clear the extent of this migration, and has pointed out some of the results of the occupation of this region. Her central theme is that the history of the settlement of this region, between 1900 and 1925, "is primarily an account of the dry-farming movement." Her study has penetrated deeply and her documentation is ample and impressive. An adequate appraisal of her work in a few words would be virtually a *tour de force*. I must be content with something less than that.

Behind the dry-farming movement lay almost a century of changing conceptions of the nature of the Great Plains. The conception of this vast area as a Great American Desert gave way, after the middle of the nineteenth century, to the conception of it as a great pasture land, and by the end of the nineteenth century the notion that much of it was arable was making headway. By that time some Americans had acquired experience of dry-farming,

and, moreover, not a few of them had been affected by the notion, then being widely disseminated, that the rainfall in the Great Plains was increasing. Furthermore, as the nineteenth century was approaching its end, the notion that the United States was facing a scarcity of food provided a reasonable incentive for expanding the area of agricultural production. All this, and more, lay in the background of the dry-farming movement.

Dry farming—that is, roughly, farming without irrigation in a dry country—was, as Mrs. Hargreaves rightly points out, nothing new, either in idea or in methodology, on the Great Plains at the beginning of the twentieth century. What was new was a union, effected early in this century, of notions of farming commonly accepted in the region of this study with the wishful thought that elevated lands therein could be farmed successfully without irrigation. Presently from this union arose a new gospel of economic salvation for people who were invited to occupy thirsty lands, a gospel which was propagated, in a manner typically American, by an organization whose evangelists knew something of the art of publicity. The best known of these evangelists was Hardy Webster Campbell, whose career Mrs. Hargreaves has skillfully depicted.

In the dissemination of the new gospel many interests were involved—railroads, real estate agencies, bankers, merchants, grain men, and even public institutions. Agricultural scientists also became involved, willy-nilly; but, because they lacked a positive program to oppose such aspects of the dry-farming propaganda as to them seemed questionable or false, those of them who wished to do so could not stem the tide. One positive contribution that they made to the movement, however, was the introduction of crops capable of withstanding drought.

Under pressure of the dry-farming propaganda came changes in land policy. Federal land policy was liberalized. Witness, for example, the Enlarged Homestead Law, the Revised Homestead Law, and the Stock-Raising Homestead Act. Such changes, however, were not made pursuant to a program of planned utilization of the public domain. Policies with respect to state-owned lands, to railroad lands, and to private holdings were also affected by the dry-farming propaganda. In this context Mrs. Hargreaves has shown that both the "sales principle" and the "homestead principle" served the same end: that is, the end of the dry-farming movement, which was to get farms settled in the region that she has studied.

How successful was the dry-farming movement? Broadly speaking, its object was accomplished. In the region of this study the population increased enormously between 1900 and 1925, the livestock interest expanded greatly between 1900 and 1919, the production of wheat increased fifteen times between 1900 and 1924, and the production of other crops showed comparable increases.

But the losses were substantial. Between 1910 and 1920 the increase of farm mortgages was noticeable, and between 1920 and 1925 the increase of farm tenancy was disquieting. Drought took a heavy toll. Many settlers in western South Dakota gave up the struggle after the drought from 1910 to 1913, and thousands in eastern Montana and in western North Dakota surrendered to adversity between 1917 and 1921. Some social dislocation resulted from the exodus of these distressed settlers.

A better appraisal of the enduring results of the first settlement of this region must await a study of what happened here during the second quarter of the nineteenth century. Happily, Mrs. Hargreaves has undertaken such a study. If it turns out to be as thorough as the book now under review, historians and economists will be much indebted to her.

J. Orin Oliphant
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The American Oasis, The Land and Its Uses. By EDWARD HIGBEE. (New York, Alfred A. Knopf, 1957, xviii, 262 pp., $5.00.)

"An oasis of plenty in what is largely a hungry world". Thus, in the apt words

of the preface, is characterized the position of the United States among the world's producers and consumers of agricultural goods.

This book is not, however, an analysis within a world-wide framework of the problems of food and population. Rather, its framework is the regional geography of the United States, its subject matter is agriculture, its theme conservation. It is interestingly written for the general reader by a widely-traveled scholar whose experience includes that of farmer, agronomist, soil conservationist, and currently, researcher and professor of agricultural geography. Unlike some treatises on the conservation of earth resources, the objective of this one, fortunately, is neither to frighten nor to preach, but to stimulate thought.

Some of the book's major strengths and weaknesses are related to its geographic framework. Part One, comprising about a fourth of the whole, deals with the "dictates" of man, climate, and land, respectively. Part Two, the remainder, treats six broad regions of the country, and adds a forecast. The regionalization of agriculture by a geographer, as well as the setting of the stage for such a regional treatment through a presentation of the history of settlement and the patterns of climate, terrain and soils, would seem to demand a rather full and careful use of maps. The only map in the book is one of soil erosion.

The summary treatment of climate is effective, although regional climatologists may disagree with the magnitude of the causal role assigned to offshore ocean currents. The classification of landforms into mountains, peneplains, plains, plateaus, an ill-defined category to which must be assigned an area reaching from Idaho to Mexico City, will trouble if not shock many landform geographers. Allocating a 34-page chapter to the agriculture of the inter-mountain West only incidentally mentioning that of the Midwestern dairy region may disappoint some readers.

One of the most effective techniques is the use of three "scales" of textual presentation. Brief discussions of major regions are augmented, first with more detailed treatments of important included regions, and finally with case studies of individual farms, the latter being chosen so as to illustrate some of the best techniques of conservational farming.

The real strengths of the book are its stimulations to thought. What are the actual and desirable functional relationships between irrigated and grazing lands? (Chapter 4, Deserts and Irrigated Valleys). Is the value of sheep and cattle grazing in national forest lands outweighed by the loss in timber and wildlife? (Chapter 5, The West Coast). Expenditures for irrigation would have benefited more farmers who needed help if allocated to the Great Plains rather than to intermontane deserts (Chapter 6, The Dry Plains). The consequences of mismanagement of land are most dangerous in the Corn Belt, where they are most subtle. The soil resource there is so great that it continues to yield profits during the process of its destruction (Chapter 7, The Corn Belt). The reasons for the defeat of the subsistence farmer in the eastern hill lands were not so much the inherent poverty of his land as the poverty of his methods (Chapter 8, The Old Frontier). The recent progress and immediate potential of agriculture in the South are so great that the area is termed "The New Frontier" (Chapter 9). Our bothersome agricultural surpluses are neither necessarily bad nor permanent (Chapter 10, Forecast).

A book that discusses such ideas in an interesting and enthusiastic but reasonable manner is a useful addition to the literature. Were it to be read by many Americans, especially farmers, all of us would profit.

Clarence W. Olmstead
University of Wisconsin

Agricultural Cooperation: Selected Readings. Edited by MARTIN A. ABRAHAMSEN and CLAUD L. SCROGGS. (Minneapolis, University of Minnesota Press, 1957, 576 pp., $7.50.)

In the preface to this 576 page volume of readings on agricultural cooperation, the

authors indicate the basis of the selection of the articles.

> In the preparation of this book, we have traced the more important historical highlights of agricultural cooperation as an emerging institution. We have examined the economic and social taproots that have fed this evolving institution—its legal foundations, aims and objectives, philosophy, principles, and theory. The place that farmer cooperatives now occupy in the national economy also has been brought into perspective. Readings have been grouped on the basis of special relevance to a particular phase or aspect of cooperative development, although many of the articles are interrelated and incorporate intertwining events and growing ideas of agricultural cooperation.

The book is divided into three parts—the evolution of the concept of commercial cooperation, the place of this type of business in our modern economy, and an evaluation of the economic, social, and cultural role of farmer cooperation. Each division is subdivided into four to six sections or chapters which include from two to eight selected articles prefaced by the authors' cogent remarks about the subject matter and the writers of the articles. The authors themselves have written two chapters—Scroggs on the "Historical Highlights" of the movement (54 pages) and Abrahamsen on "Policy Developments." A foreword by J. K. Stern, President of the American Institute of Cooperation, a list of reference readings at the close of each chapter, five appendixes describing several national associations of cooperatives and general farm organizations, notes about the contributors, and a detailed index of the subject matter complete the volume.

The authors are to be commended for their good judgment in the selection of the articles—for their sifting and winnowing from the vast amount written about cooperatives in order to present a coherent treatise about this economic institution on the American scene. I feel they have done this in an admirable fashion. The book is centered upon the economic philosophy of farmer cooperatives in the United States. It is not a manual for employees, managers, or directors, nor a compendium of world cooperative activity, nor a descriptive account of marketing, purchasing, or service companies. Rather, the 55 articles by the 49 contributors are informative, analytical, and thought-provoking, dealing with the theory, philosophy, legal backgrounds, history, evaluation, objectives, principles, and social and cultural relationships of cooperatives. It should be pointed out, however, that the articles selected present the viewpoints of writers largely sympathetic to the cooperative movement and not those of writers who challenge the place of cooperatives in the economy, have an anti-cooperative slant, or take issue with accepted dogma concerning them. In other words, the reader interested in getting both viewpoints, the pro and con, will not get the same in this volume, except as the contributors included shortcomings, weaknesses, and warnings in their otherwise favorable writings about cooperatives.

One subject, which this reviewer feels is inadequately covered, is that of income taxation of American cooperatives. This is the most controversial subject about cooperatives, has been so for many years, and will continue to be so particularly as long as corporate income tax rates are high. The issue, likewise, is one which needs to be settled on economic grounds since it goes to the very heart of the cooperative as an economic institution. Does it or does not have net income of its own, and if it does, under what circumstances? Except for brief references to it (a 2 page article by Stokdyk, and pages 245, 330 and 336), there are no detailed articles dealing with it; yet much has been written about it. I would like to have seen the article by Professor Saxon[1] (condensed, of course) and the one by Albert W. Adcock[2] included to present an economic and legal argument respectively for the taxation of patronage refunds (or articles by other authors equally as well written), and ones by other

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[1] Saxon, O. Glenn, "Statement of O. Glenn Saxon," Hearings before the Committee on Ways and Means, House of Representatives, 82nd Congress, 1st Session on Revenue Revision of 1951, Washington, D.C., pp. 1344-1362, 1951.

[2] Adcock, Albert W., "Patronage Dividends: Income Distribution or Price Adjustment," Law & Contemporary Problems, Vol. 13, No. 3, School of Law, Duke University, Durham, N.C., 1948.

economists and lawyers (Rumble or Loos, for example) to show the opposing viewpoints. With taxes today as instruments of economic control and not merely as revenue producing devices, it is particularly pertinent that the student, cooperative leader, public official, and politician understand whether net margins are or are not taxable income to the cooperative corporation per se and under what circumstances or at what times they may or may not be so.

Despite the desire to keep the volume within acceptable limits of length and restrict its discourse to that of American cooperatives, I believe the reader would comprehend the institutional character of American cooperatives better if he not only saw the contrast to non-cooperative corporations (as in Chapter 2) but to cooperatives in other parts of the world as well. Certainly, the institution of cooperatives behind the Iron Curtain is quite different from that in Western nations and that in underdeveloped nations is largely quasi-governmental in character contrasted to the capitalistic nature of the American institution. A condensed article by either Laszlo Valko[3] or by Aizsilnieks[4] describing cooperatives behind the Iron Curtain and another depicting the nature of cooperatives in non-communistic but underdeveloped countries would bring out in sharp contrast the independent and, what we consider, the true cooperative nature of the institution in this country.

I feel that the authors have given us a volume on agricultural cooperation that will be most helpful to the student; to the busy executive who has to make a speech and wishes a ready reference book for some sound material; to the lawyer who hasn't time to study case after case but needs some legislative bench marks; to the teacher whether in economics, sociology, history, political science, or philosophy as a source book; to public relations directors, directors of cooperatives, and all those who want to get the wheat from the chaff about American farmers' cooperatives. Particularly to those of us who teach courses on cooperatives and who require outside readings to supplement a text, this book is a welcome addition.

Marvin A. Schaars
University of Wisconsin

Agricultural Policy and Trade Liberalization in the United States, 1934–1956. By ALLAN RAU. (Etudes D'Histoire, Economique, Politique et Sociale, Librairie Minard, Paris, 1957, 160 pp., $4.00.)

The present problems of American agriculture are well-known, for they have loomed large in the political as well as economic areas of American life for over three decades. This volume points out the difficulties and conflicts which are current in American agricultural policy as related to world trade.

Though the United States, the leading creditor nation of the world after World War I, moved toward freer international trade in the 1930's through the Reciprocal Trade Program, Allan Rau demonstrates that this policy conflicted with the simultaneous attempt to put the farmer in a better relation with respect to other segments of the economy on the domestic scene. Tracing the development of American agricultural policy from the discussions over the tariffs of the 1920's, this analysis concludes that the parity concept is at the heart of the conflict between the domestic agricultural program and the movement toward trade liberalization, since parity prices had and have no relations to world prices of farm commodities.

Although the major emphasis is placed upon the more recent period from 1934–1956, of necessity about one-third of the book is devoted to a discussion of the 1920's when post-war depression beset American agriculture. The attempt of the New Deal to meet the increasing severity

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[3] Valko, Laszlo, "Cooperative Ideas in the Eastern and Western Worlds," Stations Circular 155, State College of Washington, Pullman, Wash., June 1951.

[4] Aizsilnieks, Arnold P., "Cooperation Behind the Iron Curtain," translated by Eric V. Youngquist and edited by Henry H. Bakken, Mimir, Box 2082, Madison, Wis. 1952.

of the farm problem is drawn out in some detail as is the period during and after the Second World War. While freer international trade has been pushed by the United States since 1934, in the agricultural segment of the economy (as in some others) restrictions have been relaxed but little. Export subsidies, import quotas, escape clauses, outright bans on imports for "health and sanitary" reasons as well as repeated use of the tariff all are part of this picture.

The more recent failure of the United States to ratify the ITO is attributed partly to the insistence upon agricultural protection, and the current resentment of some nations adhering to the GATT toward American policies is also traced to this conflict between protection of domestic farm programs on one hand and attempting to reduce trade restrictions at the same time.

As a summary of agricultural policy in relationship to trade liberalization this account is clearly written but only adequate. One feels that Mr. Rau has given too superficial treatment to a situation far more complicated than either he or most farm politicians seem willing to admit. At the heart of the conflict which is studied is the particular problem of overproduction in American agriculture—as Ezra Taft Benson can testify to his sorrow. The tremendous changes in agricultural technology with the resultant increase in production—even since World War II—confound many agricultural economists who have attempted to work out a satisfactory farm program in the context of the politically and socially possible. The solutions suggested at the end of this book do not cope with the dilemma of overproduction in the great staples although they are thoughtful in nature. Moreover, if one is inclined to point the finger of condemnation at American farmers and farm-politicians as uniquely looking out for what they, rightly or wrongly, believe to be in their own self-interest, let him also consider the recent, vocal opposition of French and Dutch farmers who view the common European market with some alarm.

Errors of fact in this account are few though as an historical study it curiously relies upon secondary works when primary source material is available, particularly in the early period. (See, for example, citations on pp. 29, 30, 49, 60, 70, 76, 83, 88, and 106, among others.) Statistics are likewise drawn largely from secondary works, and few are used for the period of the 1920's when they would prove quite valuable for the reader. The reports of the Bell and Randall Commissions have been utilized as have the more informative staff papers of the latter group. Mr. Rau has not studied very carefully the national farm organizations' policy on the tariff as it developed during the 1920's, however, for these groups did back one stand on this issue after 1922, the statement on page 43 to the contrary notwithstanding. The author should also have provided an index.

The basic dilemma of American agriculture seems as much if not more social than political and economic in nature (as Mr. Rau notes in passing), and until the social problems in the nation's farm community are met, the conflict between trade liberalization and domestic agricultural policy will no doubt continue.

James L. Connor
Washington and Lee University

Of Sheep and Men. By R. B. ROBERTSON with photographs by KATHARINE TWEED ROBERTSON. (New York, Alfred A. Knopf, 1957, viii, 310 pp., $5.00.)

The kind of sheep discussed in this volume differ in all characteristic traits from our commercial flocks in the American West. Most significantly the Scotch sheep scatter over their hills and vales, so as to dot the landscape and do not group together instinctively like the bands of Merino descent which dominate our western scene. The story is devoted very largely to the men and their families in the glens around the River Tweed, on the boundary between Scotland and England, and is mostly a discussion of how the rhythms of sheep production affect their lives and rural routines. Most all of the sheep on the Border are of

Cheviot blood but there is often a marauder, like the Blackfaced Highland ram that appears in the tale as a villain, in the first days of the breeding season.

It is quite stimulating to follow the Scotch dialect of the shepherds and their families. For example, Dr. Robertson refers to "tups" and "yowes" (pronounced *yoze*) for rams and ewes, but often long series of words are so disguised by phonetic spelling of the shepherd's pronunciation that the glossary in the second chapter is warranted.

Dr. Robertson introduces a number of ideas which may mislead popular readers and which serious students of sheep will find difficulty in accepting—for example, that sheep originated along the Scottish border instead of in Asia, or that the chief shepherd, or "herd", rests in his chair most of the time while others do the work. But there are many amusing incidents based on each assumption. When Tam, the "herd", assigned Dr. Robertson what seemed to be a temporary job during dipping at a time when the Doctor had his dress-up clothes on, the Doctor discovers that it is permanent and that the other assistant on the task is even better dressed than he. Each is afraid to have the other leave to ask Tam's advice lest he fail to return. Hence they work with the dipping until the entire band has passed through the chutes. Only then does the Doctor discover that his assistant is the Colonel who owns both the property and the sheep, of which Tam is the "herd", and who by all customs is the boss of the "hill" (sheep range) and "hirsel" (sheep under one shepherd). The book is filled with numberless incidents of this sort and Dr. Robertson has an entrancing style of writing and an infinite sense of humor.

Although there are very few illustrations compared to the incidents mentioned, Mrs. Robertson manages to get some of the most finished photographs used in any recent book. One might wish that she could show something of the gypsies, tinkers, tramps, and tourists in the same way that she shows incidents of husbandry. Surely Barry Caven deserves a character photograph among those chosen, because he saves the Doctor so many times from exposing his lack of knowledge of the sheep, the glens, and the people even though Robertson is a Scot by birth.

The author has not discovered all the rewarding products of the sheep. He does discuss wool, mutton, and tallow, but apparently the demand for lanolin had not reached the glens at the time he wrote because no reference is made to this product so important in the care of modern feminine beauty. The Doctor shows an excellent acquaintance with the French and Latin tongues in some of the titles of the chapters, even though they apply to a single particular phase of the business. For example, the parts entitled *C'est ça . . . Le Monde?* or *Revenons à Nos Moutons* are as characteristic as the section on *Lookin' The Hill* which involves the terrain over which the sheep graze, the individuals that find their sustenance there, and the cooperation of the dogs. *Baptism* spreads over the dipping while *That'll Do!* tells the almost unbelievable story of the Border Collies at work and their terse reward. *Wool Gathering*, as might be expected, covers sheep shearing, but *Caveat Emptor* does not feature selling the wool but the intimate details of the competition at public auction between small Scotch buyers and wealthy Argentinians, and the wiles employed by the natives to offset foreign bank-rolls.

Dr. Robertson himself served in the military services at a medical officer and before publishing "Of Sheep and Men" he wrote an Anarctic whaling adventure, "Of Whales and Men" (1950) which was a best seller. No one will be mistaken in investing in the new volume because most members of the Agricultural History Society will recognize what is not strictly factual and will always relish Dr. Robertson's entertaining style. Not often does one feel like congratulating a publisher on the interest-creating material he has made available to the reader but in this case, one can not resist.

Edward N. Wentworth
Chesterton, Indiana

Flat Top Ranch: The Story of a Grassland Venture. Edited by B. W. ALLRED and F. C. DYKES. (Norman, University of Oklahoma Press, 1957, xxiv, 232 pp., $4.00.)

Flat Top Ranch is a story of vision and of love for the natural beauty of his country by a man dedicated to the task of recreating and restoring the natural resources of soil, water, grass, and wildlife as God created and intended they should remain. To know the story of Flat Top Ranch is to know Charles Pettit, the owner, a frail looking, weatherbeaten man with more enthusiasm and determination than most men half his age. Although in poor health and given up as a bad risk many years ago, he has found the reclamation of worn-out farm land so challenging and so absorbing, that he is today a younger man in terms of health than he was 25 years ago.

Born and reared in North Texas in good ranching country, in the days before barbed wire and the plow, Charles Pettit had long dreamed of owning and operating his own ranch. Having worked hard as a boy, he was alternately broke and on his feet repeatedly until his efforts and savings paid off in the East Texas oil fields. After having made considerable money in oil, and unlike many of his oil rich friends, Mr. Pettit felt a real desire to make a permanent and lasting contribution to the betterment of agriculture. In spite of his years and his delicate health, he longed for that ranch with tall grass and fat cattle. After much searching he settled on the area around Flat Top Mountain near Walnut Springs in Central Texas, where in 1938-39 he purchased a number of worn-out, small farms and combined them into a total of 17,000 acres of badly eroded and abandoned farm land.

Charles Pettit is the first to admit that he invested some oil money in the improvements of Flat Top Ranch. He also modestly gives credit for his success to various agricultural agencies with whom he has cooperated. Yet, his dedication to permanence and economically sound management has restored the productivity of the land beyond that which nature gave it many years ago. Every improvement has been made with the idea of permanence, utility, and economy. Buildings, roads, fences, pastures, livestock, and the people about him all bear that stamp. Flat Top Ranch today is a model, a demonstration, a living example of what the forces of nature will do if man will only cooperate.

Charles Pettit and his able crew of assistants have planned for the future by soil and water conservation practices, water storage reservoirs, clearing and eradication of undesirable brush, which with wise management has re-established native grasses in ever-increasing density and productivity. The ranch today is a sea of grass with many small lakes where wildlife and fish complete the picture. Even after torrential rains the water which leaves Flat Top Ranch is clear and free of valuable soil.

With the help of his able ranch manager W. B. (Bill) Roberts, the Flat Top herd of Hereford cattle has earned the distinction of being one of the very best in the nation. While many breeders were being influenced by fad and fancy, Charles Pettit and Bill Roberts have continued to breed good, honest, productive cattle in demand by both purebred and commercial producers. In more recent years Yorkshire hogs have been added to the ranch livestock program and here again Flat Top leads the way in the production of the meat type pig designed to meet consumer demand.

The book is well written by able authorities in the fields of geology and soils, grassland improvement, range management, soil and water conservation, and beef cattle breeding and improvement. A chapter is also devoted to the ranch family itself, which is the key to successful operation. Although it is informative, technically accurate, and good reading, the book is a poor substitute for a visit to the ranch. The reader who loves nature in all her glory, who cherishes American traditions of the rugged individual in a free enterprise system, and who believes in the conservation of natural resources for future generations, will not be satisfied until he has visited Flat Top. And therein lies the real value of the

book, for nowhere in the Southwest is there a finer example of man's handiwork in tune with the forces of nature.

J. C. Miller
Dean, School of Agriculture
Agricultural and Mechanical
College of Texas

Louis Bromfield and His Books. By Morrison Brown. (Fairlawn, N. J., Essential Books, Inc., 1957, x, 166 pp., $4.50.)

This book is a worthy addition to any library. It is an easily read, informal account of the life of Louis Bromfield and includes comprehensive résumés and critical evaluations of the majority of his writings. Moreover, it is of special interest to the farmer, to whom Mr. Bromfield is known as the owner and operator of Malabar, a farm designed to stimulate an interest in those modern farming methods best-suited to maximum agricultural development and conservation of the soil.

Brought up in Mansfield, Ohio, by a father who understood and loved the land, Mr. Bromfield, after a semester of agricultural study at Cornell, returned to work on his grandfather's farm. Eighteen months later, spurred by his mother's ambition and his own lively curious mind, he left the farm for Columbia's School of Journalism, intent on a career as a writer. His first novel, "The Green Bay Tree," precipitated him into the ranks of world-famous novelists. During the next 24 years, living mostly in France, he followed it with a tremendous number of articles, novels, and essays, all of which added to his reputation and eventually won him the Pulitzer prize.

In 1939 he purchased three farms in Richland County, Ohio, where he had grown up, and from that point on, his attention became more and more centered in the farming operation. His tremendous energy was turned to the problems of land reclamation with such success that the farms were visited each year by thousands. Mr. Brown believes that the revolutionary ideas of farming used on the Malabar farms stimulated the over-all agricultural development of the country, and he adds that it would be difficult to know, when Bromfield died, in 1956, whether he was better known as a novelist or a farmer and farm writer.

Several books were written by Mr. Bromfield about Malabar farm and the life there. Mr. Brown has included reviews of them which should interest the farmer who is concerned with the modern agricultural experiments which were carried on at Malabar by Mr. Bromfield. The books record not only the trials and successes in restoring the farms to fertility, but describe also the beauties and satisfactions of American country life. Mr. Bromfield looked upon Malabar as a 'pilot farm', hoping with his writing to interest many "to farm in a way that would build up the fertility of the soil and increase production." To that end he described in detail many of the things which were done under his supervision to bring worn-out land into full production, to conserve water, to use the farm pond as an area of farm production, and many similar suggestions.

Mr. Brown has succeeded in writing a book which should reach and interest a varied audience. Whether the reader is interested in Bromfield as a novelist or as a farmer, this book will furnish him with a broad picture of Louis Bromfield, his books, and his career as an agriculturalist. Those readers already familiar with the novels will find pleasure in learning the circumstances in which they were written; others may be drawn to read them now for entertainment and instruction.

Gertrude Gelder Bryan
Champaign, Illinois

Evolution of the Veterinary Art. A Narrative Account to 1850. By J. F. Smithcors. (Kansas City, Mo., Veterinary Medicine Publishing Co., 1957, xviii, 408 pp., $6.50.)

From the time that man first raised livestock he has tried to treat their ills and injuries. Very early, men more skilled or more successful than their fellows began to specialize in this art. The Babylonian Code of Hammurabi (*c.* 2250 B.C.) set prices for curing animals. The Egyptian veterinary

papyrus of Kahun (*c.* 1900 B.C.) gave prescriptions for treating a dog with the "nest of a worm" and bulls with "ushau" and "wind." Veterinary medicine may have been even more advanced in ancient India. The first veterinarian whose name we know was Salihotra. The *Veda* on horses, probably written between 1800 and 1200 B.C., is ascribed to him, and Indian veterinarians after his time were known as *Salihotriya*.

The Greeks paid little attention to animal diseases, although a short section of Aristotle's *Historia animalium* was devoted to them. The ancient Romans made a few advances. Varro (116-27 B.C.) discussed the care and diseases of livestock in his *Rerum rusticarum*, Vergil (70-19 B. C.) gave a good deal of veterinary information in his *Georgics*, Pliny (23-79 A.D.) described rabies, mange, moon-blindness, bloat and other diseases, and Columella (1st century A.D.) mentioned some 60 diseases in his *De re rustica*.

After Columella there was no other veterinary writing until the fourth century, when Apsyrtus compiled a collection of letters by himself and other Byzantine veterinarians, cavalry officers, castrators and horse-owners. This collection and other later writings formed the *Hippiatrika* which was brought together in the tenth century at the order of Constantine Porphyrogenitus. In the meantime, during the fifth century Vegetius in Rome published his *Artis veterinariae*, which drew heavily on the letters of Apsyrtus. Vegetius has been called the father of the veterinary art, but this honor properly belongs to Apsyrtus.

Little worth noting occurred during the intellectual hibernation of the Middle Ages. In 1528 Vegetius' work was printed, followed in 1530 by the *Hippiatrika*. The former was translated into English in 1748 but the *Hippiatrika* never has been.

The publication in 1598 of Ruini's *Anatomia del cavallo* did for equine anatomy the same thing that Vesalius had done earlier for human anatomy. Ruini's plates were as magnificent as those of Vesalius.

This work, which marks the beginning of veterinary science, stood alone until almost the modern period. Ruini was a wealthy lawyer, and there were no veterinarians to carry on after him. Livestock were treated—or, rather, mistreated—by ignorant farriers and cow-leeches. Common sense and humanity were exceptional. For example, Gervase Markham, whose *Maisterpeece* of 1610 went through 21 editions and whose writings and recommendations dominated the veterinary art for over a century, recommended watering a horse only once a day: if a fat horse from a crystal spring but if a lean one either with undiluted sewage from a dunghill or common sewer or with river water containing blood, offal and excrement. His treatment for farcy was to soak pledglets of tow in brandy, put them in the horse's ears, and stitch them shut. To cure a splint he recommended that it be beaten with a stick "by degrees a little harder and harder, till the splint grows soft in every part, then with the point of your lancet let out all of the blood and water." Then rub it with a brickbat "exceedingly hot" and dress it with hot pitch and rosin.

Such practices and worse were continued through the 18th century and even into the 19th. Blood-letting in quarts and gallons was standard practice. Noxious drugs were popular; an 18th century dispensatory included cow, dog, hog, peacock, pigeon and horse dung, assorted urines, beetles, frogs, herrings, millipedes, puppies, toads, vipers and worms.

The red-hot iron was popular. To cure flatulence, a hole was bored with it into the rectum above the anus. For shoulder strain, according to a contemporary, "Some farriers cut a hole through the skin in the middle of the shoulder, and with the shank of a tobacco pipe blow it as a butcher does a shoulder of veal; then they run a flat cold iron like a horseman's sword blade, eight or ten inches up, between the shoulder blade and his ribs, which they call boring; after they burn him around his shoulder with a hot iron, and cross it like a glass church window; next they lay a charge all over the shoulder, which is a composition of pitch, rosin and tar, then put a patten

shoe upon the contrary foot, and in that condition turn him to grass." (The patten shoe was a large wooden clog which, when placed on the sound foot, forced the horse to put his weight on the injured one.)

After a series of plagues had killed many millions of cattle in Europe in the early eighteenth century, the first veterinary school was founded at Lyon, France in 1761. It was followed in 1765 by another one at Alfort. These schools began to develop a veterinary profession.

The London Veterinary College was founded by a French veterinarian, Charles St. Bel (Sainbel), in 1791. He set up a three-year course but died two years later. He was succeeded by Edward Coleman, who promptly reduced the course to three months and whose ignorant and maleficient influence guided British veterinary practice for the next half-century. Smithcor's book concludes in the middle of the 19th century as the profession was struggling to improve itself.

This book's most important fault is its lack of balance. Most of it is devoted to Great Britain from the 16th to 19th centuries, and this part of the book is far better than the parts which deal with earlier time and other lands. In addition, the author has the distracting habit of moralizing about modern practices and shortcomings while describing ancient ones. His discussion of Hippocrates, for example, is interrupted by five of these little homilies. It is hoped that these deficiencies will be remedied and that in its next edition this will be a much improved book.

Norman D. Levine
University of Illinois

Notes and Comment

An upsurge of interest in veterinary history is indicated by the recent inauguration of courses in the subject at Michigan State University and at the State College of Washington. And as Dr. A. Barton noted in *Veterinary Medicine* (August 1957) "veterinary journals are encouraging the study by accepting articles on the subject with increasing frequency. . . . It is safe to predict that within a short time veterinary history will be a routine subject in the veterinary curriculum. . . . Veterinary history will have a broadening, liberalizing, and humanizing influence on the veterinary curriculum that will tend to produce a superior type of professional man; one who will not be hide bound by narrow professional specialization."

A recent addition to the literature of veterinary history is J. F. Smithcors' *Evolution of the Veterinary Art,* reviewed elsewhere in this issue.

The publication of Chymia, an annual devoted to the history of chemistry, will be resumed in the spring of 1958 with volume five. The publication is now sponsored jointly by the Edgar Fahs Smith Collection of the University of Pennsylvania and the Division of the History of Chemistry of the American Chemical Society. All papers will be published in English. The Editor-in-Chief is Henry M. Leicester, College of Physicians and Surgeons, San Francisco, California, and all articles for publication should be submitted to him.

The University of Chicago and the University of Virginia are sponsoring the publication of a new and complete edition of the papers of James Madison. The editors will appreciate information about the location of letters by or to James Madison or his wife, especially letters in private possession or among uncalendared manuscripts in the collections of public or private institutions. Please address The Papers of James Madison, 1126 East 59th Street, Chicago 37, Illinois.

The Economic History Association and the Conference on Research in Income and Wealth held a joint meeting at Williams College, Williamstown, Massachusetts, Sep-

tember 4-5, 1957. Papers of special interest to agricultural historians included "Gross Farm Product and Investment, 1800-1900," by Marvin W. Towne and Wayne D. Rasmussen; "Canadian Agricultural Developments, 1850-1900," by W. M. Drummond; "The Demography of Slavery: 1790-1860," by Ernest Rubin; "The Economics of Slavery in the Ante-Bellum South," by Alfred H. Conrad and John Meyer.

A recent count of blacksmith shops in Louisiana shows the state still has ninety-three, earning a total of $306,000 yearly. In New Orleans, eleven smitheries do a thriving business keeping peddlers' wagons in repair, shoeing racehorses, and maintaining the horse and carriage business which is supported by tourists.

At Blue Mountain Lake, New York, late last summer a new Adirondack Museum was opened for the purpose of recreating the way of life of early settlers, loggers, and resorters in that area. The museum's exhibits devoted to old logging days include a lumberjacks' bunkhouse, iron-bellied stoves, logging tools, wagons and sleds. A rotating exhibit of historical photographs will be displayed in the main hall.

Residents of Plymouth, Massachusetts, have established an annual ceremony of corn planting to celebrate the first spring planting of the Pilgrims in 1621. As an added bit of authenticity to the ritual, a herring caught in Town Brook is planted in each hill of corn for fertilizer.

A session on agricultural history was organized for the program of the Pacific Coast Branch of the American Historical Association meeting at San Francisco December 27-29. Professor James H. Shideler, University of California at Davis, acted as chairman. Papers were scheduled by Henry E. Erdman, "The Development and Significance of California Cooperatives, 1900-1920"; and by Grace Larsen, "A Progressive in Agriculture: Harris Weinstock." Reynold Wik of Mills College and Gladys Waldron of San Jose State College were commentators.

A new compendium of the Columbia University Oral History Collection, which consists of the reminiscences of leading figures in many sectors of American life, has just been issued as an aid to research scholars. The compendium offers brief descriptions of 195 manuscripts, about two thirds of which are now available to qualified researchers. The rest remain closed for varying periods specified by their donors. The Collection now totals some 65,000 pages, with approximately 35,000 more in process or awaiting clearance for submission. Copies of the compendium may be obtained by writing the Oral History Research Office, 103 Butler Library, Columbia University, New York 27, N. Y.

The Oral History Research Office, founded by Professor Allan Nevins in 1948 to gather materials in the field of recent American and world history, employs trained historians who use modern electronic recording equipment to interview their subjects, often at considerable length. The interviews are then transcribed, edited, indexed, and deposited in Special Collections, Butler Library. The project has been financed by grants from individuals and foundations, the University providing quarters and overhead, as well as an annual grant from its Bancroft fund.

C. Clyde Jones who has been associate editor of *Agricultural History* will become the editor beginning with the April 1958 issue. Manuscripts and correspondence henceforth should be addressed to the new editor at Room 112, David Kinley Hall, University of Illinois, Urbana, Illinois.

ACTIVITIES OF MEMBERS

Clayton S. Ellsworth of the College of Wooster is on research leave for the current year, and has received a grant from the American Philosophical Society for work on his social history of American agriculture.

John D. Hicks retired from active duty at the University of California, Berkeley, effective July 1, 1957 and is spending the year in travel in Europe.

Rita McDonald of Montana State College spent part of the summer doing research in Washington, D.C.

Bennett H. Wall, at the mid-winter meeting of the Wisconsin State Historical Society in Madison, discussed "Lyman C. Draper's Trail a Century Later."

M. L. Wilson, past president of the Society is in India for six months as a consultant for the Ford Foundation on extension and community development.

Mervin G. Smith, Ohio State University, served during the past summer as a consultant, under auspices of the ICA, for the Center for Monetary Studies in Latin-America, visiting sixteen different countries.

RECENT ARTICLES OF INTEREST

Agricultural Engineering—June, 1957 (Fiftieth Anniversary issue devoted to the history of technological developments in agriculture since 1907): "Fifty Years of Tractor Development in the U.S.A.," by Roy B. Gray and E. M. Dieffenbach; "Fifty Years of Farm Machinery," by H. F. McColly; "Drainage Developments During the Past Fifty Years," by John G. Sutton; and other articles of interest.

The Agricultural History Review—Part I, 1957: "The Agricultural Activities of John Wilkinson, Ironmaster," by W. H. Chaloner; "The Consolidation of the Crofting System," by Malcolm Gray; "Pollen Analysis: a Technique for Investigating Early Agrarian History," by J. W. Franks; "The Sheep Corn Husbandry of Norfolk in the Sixteenth and Seventeenth Centuries," by K. J. Allison.

Part II, 1957: "Some Recent Danish Experiments in Neolithic Agriculture," by Axel Steensberg; "The British Plough: Some Stages in Its Development," by F. G. Payne.

Agriculture—April, 1957: "British Grain in Roman Times," by J. R. B. Arthur.

American Historical Review—July, 1957: "The Rise of Serfdom in Eastern Europe," by Jerome Blum.

Annals of Iowa—July, 1957: "The First Cream Separator in the United States," by T. P. Christensen.

Foreign Agriculture—January, 1957: "Twenty Years of Soviet Agrarian Policy," by Lazar Volin.

The Georgia Review—Summer, 1957: "The Genesis of Georgia's Livestock Industry," by James C. Bonner.

The Journal of Economic History—June, 1957: "The Noble as Landlord in the Region of Toulouse at the End of the Old Regime," by Robert Forster.

The Journal of Mississippi History—July, 1957: "Logging and Rafting Timber in South Mississippi, 1840-1910," by Nollie W. Hickman.

The Journal of Southern History—February, 1957: Notes and Documents: "Writers of Anonymous Articles in the Farmer's Register," by Edmund Ruffin; May, 1957: "An Oklahoma Indian Trader as a Frontiersman of Commerce," by Oliver Knight.

Maryland Historical Magazine—June, 1957: "Documents Relating to the Colonial Tobacco Trade," by John M. Hemphill, II.

Mid-America—July, 1957: "Ignatius Donnelly and the Greenback Movement," by Martin Ridge.

The Midwest Journal of Political Science—August, 1957: "The Commodity Credit Corporation and the 1948 Presidential Election," by Oliver P. Williams.

Minnesota History—June, 1956: "The Roots of the Farmer-Labor Party," by Arthur Naftalin; March, 1957: "Bishop Ireland's Connemara Experiment," by James P. Shannon.

The Mississippi Valley Historical Review—June, 1957: "Fulfilling American Democracy: the Conservation Movement, 1907 to 1921," by J. Leonard Bates.

Nebraska History—September, 1957: "Back to Normal," by R. E. Dale.

North Carolina Historical Review—July, 1957: "Gifford Pinchot at Biltmore," by Harold T. Pinkett.

Pacific Northwest Quarterly—July, 1957: "The West, States Rights, and Conservation," by Laurence Rakestraw.

The Southern Historical Quarterly—July, 1957: "The Texas Cotton Acreage Control Law of 1931-1932," by Karl E. Ashburn.

The Swedish Pioneer Historical Quarterly—April, 1957: "Swedes Pioneer a New Land," by Theodore A. Norelius.

Veterinary Medicine—August, 1957: "The History of Some Current Problems in Animal Disease, VI: Hog Cholera," by J. F. Smithcors.

The William and Mary Quarterly—May, 1957: "The French-Farmers General in the Chesapeake: The Mackercher-Huber Mission of 1737-1738," by Jacob M. Price; Notes and Documents: "Johann Martin Bolzius Answers a Questionnaire on Carolina and Georgia," translated and edited by Klaus G. Leowald, Beverly Starika, and Paul S. Taylor.

LIST OF RESEARCH PROJECTS

A list of research projects in agricultural history, based upon questionnaires sent to the members of the Society last year, has been compiled by the Secretary-Treasurer. A revised list will be issued in the spring of 1958, and all members and others are urged to send notices of new or unreported research projects for inclusion in the list. Such notices and requests for the present list should be addressed to Wayne D. Rasmussen, Secretary-Treasurer, Agricultural History Society, U. S. Agricultural Marketing Service, Washingon 25, D. C.

THE AUTHORS

Charles M. Allmond, III, recent graduate of the University of Delaware, is state seed analyst for the Delaware State Board of Agriculture, Dover.

Chao Kuo-Chun is author of the recently published *Agrarian Policies of Mainland China, 1949-1956* (Harvard University Press, 1957).

James R. Connor, former assistant professor of history at Washington and Lee University, is presently engaged in American foreign relations research, under a Southern Fellowships Fund grant.

Mary W. M. Hargreaves, Lexington, Kentucky, is author of *Dry Farming in the Northern Great Plains, 1900-1925* (Harvard University Press, 1957).

F. Hal Higgins, Walnut Creek, California, former editor of several agricultural periodicals, is an indefatigable collector of documents concerning the history of agricultural mechanization.

Roy V. Scott is assistant professor, Department of Social Sciences, Southwestern Louisiana Institute, Lafayette.

Robert L. Tontz is acting chief, Trade Statistics Branch, Foreign Agricultural Service, U. S. Department of Agriculture. His contribution, based on a chapter of his Ph.D. thesis, *The Evolution of "Agricultural Parity"* (Oklahoma State University, 1952) is one of several parity studies he has made during the past decade.

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ARTICLES

Monetary Systems and Accelerator Models ..... H. P. MINSKY
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Instalment Credit and Prosperity ..... ALAIN ENTHOVEN
New Zealand's Experiment in Economic Planning ..... J. B. CONDLIFFE
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REVIEW ARTICLES

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The Everett Eugene Edwards Awards in Agricultural History

The Agricultural History Society, in partial recognition of the outstanding services of Everett E. Edwards to the organization and in honor of his memory, has established the Everett Eugene Edwards Memorial Awards to be given to the authors of the two best articles (presidential addresses excluded) in *Agricultural History* each year. One prize of $50.00 is offered for the best manuscript submitted by an author who is in the course of taking a degree and one prize of $50.00 for the best published article by an author who is a more advanced scholar.

The Awards are financed from the Edwards Memorial Fund to which all members of the Society and other interested persons are invited to subscribe. However, the amounts necessary to pay the Awards for a period of ten years have been guaranteed by three of Edwards' former co-workers.

All articles to be considered for publication and other communications regarding editorial matters should be addressed to D. A. Brown, College of Agriculture, 226 Mumford Hall, Urbana, Illinois. *Address inquiries regarding the* Memorial Fund, Membership in the Society, *and business matters to* Wayne D. Rasmussen, *Secretary-Treasurer*, U. S. Agricultural Marketing Service, Washington 25, D. C.

The Journal of Farm Economics

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Dear Lauren Soth: Must We So Nearly Despair? ..... John D. Black
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